

# Disability and Health in Delaware

*Delaware Behavioral Risk Factor Surveillance System,  
2009 Select Data*

Prepared by:  
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## **OVERVIEW: HEALTHY DELAWAREANS WITH DISABILITIES PROJECT**

The Healthy Delawareans with Disabilities (HDWD) project is a five-year (2007-2012) cooperative agreement between the National Center on Birth Defects and Developmental Disabilities (NCBDDD) of the Centers for Disease Control and Prevention (CDC), and the Center for Disabilities Studies (CDS) at the University of Delaware. HDWD works to improve the health status of people with disabilities and focuses on preventing secondary conditions and promoting the health and wellness of Delawareans with disabilities. HDWD develops and implements various health initiatives and health promotion activities in collaboration with state and community partners; analyzes data related to disability and health; raises awareness about health and wellness issues encountered by individuals with disabilities; works to improve access to and inclusion in health care and wellness activities; and provides technical assistance to state and community agencies about disability and health-related issues.

### **HDWD Mission**

To act as a catalyst for systems change to make health and wellness programs more accessible and inclusive.

### **HDWD Vision**

All individuals with disabilities in Delaware will live active and healthy lives and will have the resources, supports, programs, and services necessary to do so.

For more information on the HDWD project visit our website at [www.gohdwd.org](http://www.gohdwd.org) or contact:

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## INTRODUCTION

*“Today, 54 million Americans—more than one fifth of us—are living with at least one disability. Some individuals are born with a disability; others acquire disabilities over the course of their lifetime. At any time, each of us is at risk for acquiring a disability, whether through an illness, an injury, genetics, or any number of other causes. With the “baby boom” generation approaching later life, there will be increased numbers of persons with or at risk for a disability. The sheer numbers of persons with disabilities today and tomorrow mean that disability is an issue for the nation as a whole, not just for those of us concerned about public health.”*

Richard Carmona, M.D., M.P.H., F.A.C.S.

Former Surgeon General

*The Surgeon General’s Call to Action to Improve the Health and Wellness of Persons with Disabilities (US DHHS, 2005)*

Few data sources collect information specifically on health and health care access for people with disabilities. Existing data sets, however, show that people with disabilities experience disparities in health and health care access when compared to people without disabilities. The need to collect data on disability to further document and address health disparities affecting persons with disabilities has recently been articulated on a national level. This national focus will hopefully augment state and national efforts to target and reduce evident health disparities (CDC, 2011).

This report includes the existing data on the health disparities reported in the Delaware Behavioral Health Risk Factor Surveillance System.

The Healthy Delawareans with Disabilities Project (HDWD) concentrates on identifying and reducing health disparities and improving access to healthy lifestyles for persons with disabilities. Factors that prevent Delawareans with disabilities from participating in and benefiting from healthy lifestyle behaviors should be addressed to decrease disparities and improve health (CDS, 2009).

## **METHODOLOGY**

### **Behavioral Risk Factor Surveillance System**

The Behavioral Risk Factor Surveillance System (BRFSS) is a continuous, random-digit dialing telephone survey of adults 18 years and older that has been conducted in all 50 U.S. states and territories by the Centers for Disease Control and Prevention (CDC) since 1984.

The BRFSS tracks health conditions and risk behaviors of the U.S. population and is considered an acceptable method for determining prevalence of many risk behaviors in the general population (CDC, 2009). It can also be used to monitor the health status of special interest populations, such as adults with disabilities and ethnic and minority groups, on national, state, and local levels.

The survey collects data on a variety of health risk factors, preventive behaviors, chronic conditions and emerging public health issues. The survey includes a core component of questions that are asked in all 50 states and territories. Components and individual questions have changed over time and some components are administered on a rotating basis, every other year or every third year. Optional modules allow states and the CDC to gather information on topics that are not included in the core component of the survey. States also have the option to include their own additional questions of specific interest in the state. Call-back surveys can also be performed to gather additional information from selected participants based on their responses to some questions.

In 2009, the Delaware BRFSS questionnaire included eight optional modules. These modules included: Childhood Asthma Prevalence, Childhood Immunization, Colorectal Cancer Screening, Diabetes, Pre-diabetes, Prostate Cancer Screening, Random Child Selection, and Social Context. Although data for these modules was collected, not all of the topics were analyzed and included in this report. Modules that focused on child health issues were not included. Modules that do not capture a large enough sample size of people with and without disabilities are not analyzed for this report due to issues of validity.

Through 2008, only landline telephone numbers were used in Delaware for the sampling. In 2009, pilot data from cell phone users was collected but not used in data analysis. Beginning with 2010 data, both landline and cell phone users will be reflected. Future data reports should capture data from households that use cell phones but do not have a household landline. This change in sampling method may

improve the quality of data collected and potentially reach populations not fully represented in previous BRFSS data.

The data collection agent for Delaware is the Center for Applied Demography and Survey Research of the University of Delaware under contract with the Delaware Department of Health and Social Services, Division of Public Health. A committee of public and private health professionals selects the sampling methods, optional modules, and additional questions for Delaware based on available federal and state funding each year.

The state BRFSS tabulations from CDC include weighted sample size numbers (weighted Ns) for each demographic category. CDC recommends the use of these weighted Ns to illustrate prevalence or estimate the proportion of adults in the state with certain health risk behaviors or conditions. For this HDWD report, weighted percentages were used for all tables and graphs.

### **Sample**

To assess health risk behaviors and conditions among adults with and without disabilities in Delaware, HDWD analyzed the most recent data available from the 2009 Delaware BRFSS surveys. The total Delaware sample size for 2009 was 4,361. This sample size was weighted to reflect percentages for the entire population of adults in Delaware (671,340). Nearly all (99.5%) survey respondents answered the disability questions.

### **Disability Indicator**

To identify a person with a disability, two survey questions are asked as part of the core BRFSS. The first question addresses limitations that affect participation in daily life. The second question addresses use of special equipment. All respondents are asked these two disability questions.

- Are you limited in any way in any activities because of physical, mental, or emotional problems?
- Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?

Respondents who respond “yes” to either question are classified as having a disability.

In 2009, 18.4% of adults surveyed by the Delaware BRFSS reported limitations in activity and 7.2 % reported the use of special equipment.

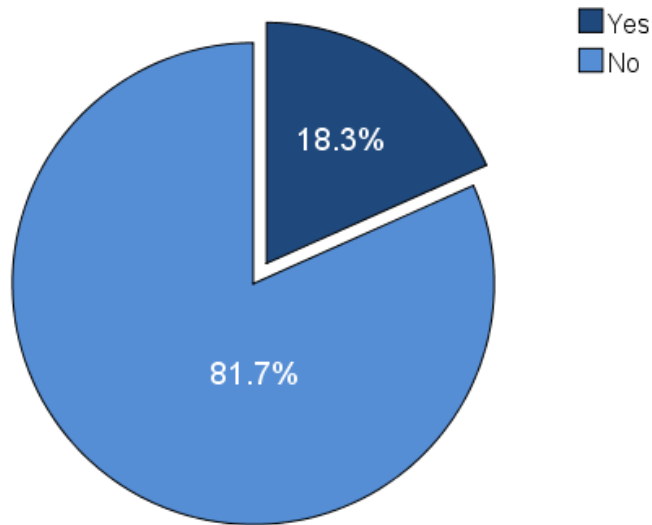
*Disability and Health in Delaware*

In 2009, respondents classified as having a disability, based on the weighted Ns, made up 20.0% (n=133,377) of the total Delaware population [See Figure 3. Disability Status of Delawareans].

Table 1. Delawareans reporting limitations and use of special equipment

Variable	Yes	No
Limited in an activity due to physical, mental, or emotional problems	18.4%	81.6%
Have a health problem that requires the use of special equipment	7.2%	92.8%

Figure 1. Population of adults that report being limited in an activity because of physical, mental, or emotional problems.





*Disability and Health in Delaware*

Figure 2. Population of adults that report a health problem that requires the use of special equipment.

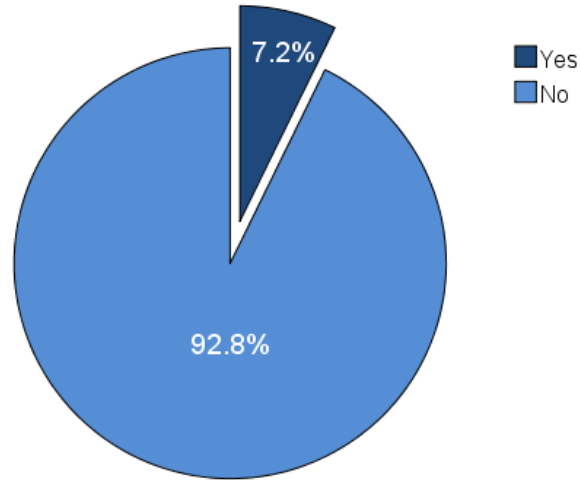
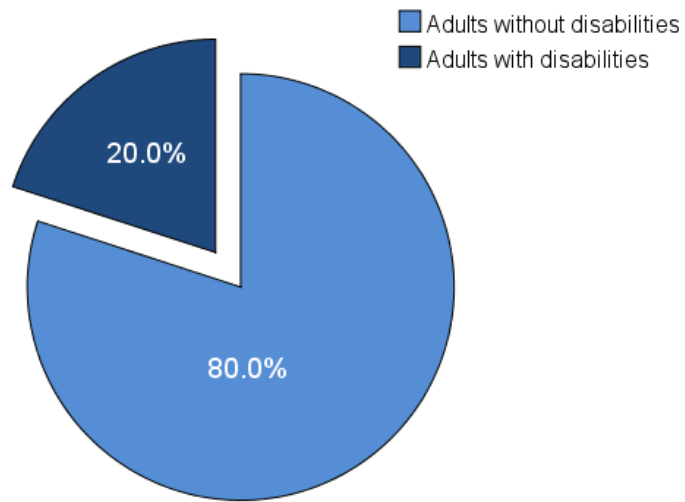


Figure 3. Disability Status of Delawareans



### **Limitations of the BRFSS for Adults with Disabilities**

The BRFSS is not specifically designed to survey adults with disabilities. It focuses on general behavioral health risk factors for the adult U.S. population living in the community.

The BRFSS does not collect disability type or needs-specific data and does not include all individuals with disabilities. Adults with disabilities living in group homes, those who need to use assistive devices to communicate, or those in hospitals, long-term rehabilitation centers, or residential treatment centers are not included in the sampling frame. While it provides a way to compare adults who have and who do not have a disability, it does not allow for examining differences by type of disability or capture data about the severity, permanence or duration of disability. Responses in the survey are based on self-report and are subject to recall bias. Information may be underreported or overreported.

Little is known about number, diversity, geographic distribution, and needs of Delawareans with disabilities. Existing data about the health and wellness of Delawareans with disabilities and special health care needs is sparse and fragmented. The definitions and types of data collected are not always consistent across agencies, which impedes effective collaboration and construction of a system-wide accounting of disability-related health resources and needs. Delaware needs, but lacks, a comprehensive, state-wide database system for tracking health conditions, individual needs, and services provided. This report is a first step in addressing that lack of information.

## **DATA ANALYSIS**

Data tables and figures are presented after the narratives for each section. For the tables, weighted Ns are used to produce the proportions of adults with disabilities and adults without disabilities for each question in the survey. Adults with and without disabilities are contrasted in graphs for each tabled question.

Some questions are designed to survey a subset of the sample. For example, questions that look at gender-specific screening are administered only to respondents of that gender. Questions about health care coverage look at the subset of adults that are less than 65 years of age and are ineligible for Medicare, to better gauge disparities in health care coverage. Further, sometimes gender and age are applied together for a particular health issue, like mammography screening.

In small states like Delaware, some subsets do not have a sufficient number of responses to be used in prevalence tables because of sample constraints in population weighting procedures. The relatively small sample size of people with disabilities in Delaware makes subset analysis difficult in some cases. In this report comparisons were designed so as to maximize the weighting results, combining categories with few responses while being true to the integrity of the comparison measure.

### **Demographics**

This section shows a demographic portrait of adults with and without disabilities in Delaware.

#### ***Population***

The State of Delaware is composed of three counties, with 60.3% of the population residing in New Castle County, 17.6% in Kent County, and 22.1% in Sussex County. Of respondents reporting a disability, 59.3% live in New Castle County, 17.6% live in Kent County, and 23.1% live in Sussex County.

#### ***Gender***

Of survey respondents who reported having a disability, 53.8% were female and 46.2% were male. Of survey respondents who did not report having a disability, 52.0% were female and 48.0% were male.

#### ***Age***

Of respondents reporting a disability, 19.3% were 18 to 34 years old, 17.0% were 35 to 44 years old, 15.3% were 45 to 54 years old, 20.1% were 55 to 64 years old, and 28.4% were 65 or older. Of respondents not reporting a disability, 31.8% were 18 to 34 years

old, 18.6% were 35 to 44 years old, 19.8% were 45 to 54 years old, 13.6% were 55 to 64 years old, and 16.2% were 65 and older.

***Marital Status***

Of respondents reporting a disability, 53.7% reported being married or with a partner. Of respondents not reporting a disability, 65.3% reported being married or with a partner.

***Race/Ethnicity***

Of respondents reporting a disability, 78.9% reported being White and 11.0% reported being Black. Ten percent (10.1%) of respondents reporting a disability reported being of a race other than White or Black. Of respondents not reporting a disability, 75.2% reported being White, 14.1% reporting being Black and 10.7% reported being of a race other than White or Black.

***Employment***

Thirty-seven percent (36.7%) of individuals who reported having a disability stated that they were employed. Sixty-eight percent of adults (67.7%) who reported not having a disability stated that they were employed.

***Education***

Data on education shows that 30.0% of those who reported having a disability also reported having a high school diploma or equivalent as their highest level of education. Of those who reported not having a disability, 28.2% reported having a high school diploma or equivalent. Data shows that 32.0% of those who reported having a disability also reported graduating college. Of those who reported not having a disability, 41.6% reported graduating college.

***Income***

Thirty-three percent (33.2%) of adults who reported having a disability reported having a household income of \$25,000 or less. Of respondents who reported not having a disability, 13.8% reported having a household income of \$25,000 or less. Forty-three percent (43.1%) of those with a disability reported having a household income of \$50,000 or more. Of those not reporting a disability, 62.5% reported having a household income of \$50,000 or more.

Table 2. Demographic and health behavior characteristics among adults with and without a disability

Demographics			
Variable	Categories	Without a Disability	With a Disability
Population	New Castle	60.6%	59.3%
	Kent	17.6%	17.6%
	Sussex	21.9%	23.1%
Gender	Female	52.0%	53.8%
	Male	48.0%	46.2%
Age	18-34	31.8%	19.3%
	35-44	18.6%	17.0%
	45-54	19.8%	15.3%
	55-64	13.6%	20.1%
	65+	16.2%	28.4%
Marital Status	Married or with partner	65.3%	53.7%
	Other	34.7%	46.3%
Race/Ethnicity	White	75.2%	78.9%
	Black	14.1%	11.0%
	Other	10.7%	10.1%
Employment	Employed, full- or part-time	67.7%	36.7%
	Not Employed	32.3%	63.6%
Education	Some high school or less	5.8%	11.4%
	High school diploma or GED	28.2%	30.0%
	Some college or technical school	24.4%	26.6%
	College graduate	41.6%	32.0%
Income	Less than \$15,000	7.1%	16.3%
	\$15,000 to less than \$25,000	6.7%	16.9%
	\$25,000 to less than \$35,000	9.0%	9.9%
	\$35,000 to less than \$50,000	14.7%	13.9%
	\$50,000 or more	62.5%	43.1%

Figure 4. Gender of adults with and without a disability

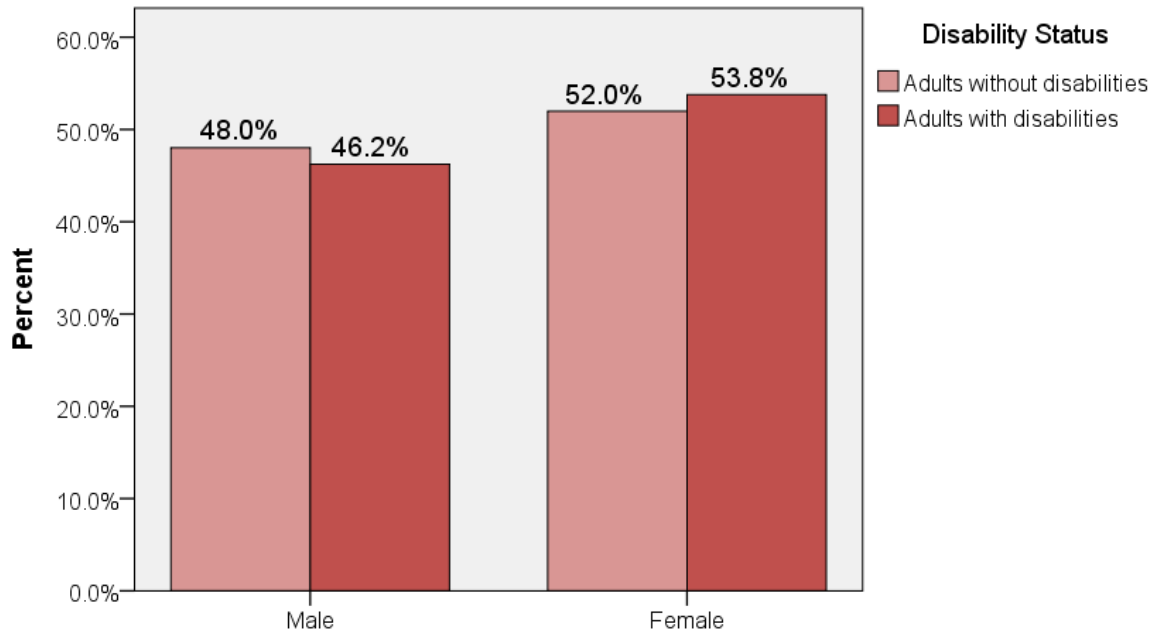


Figure 5. Age distribution of adults with and without a disability

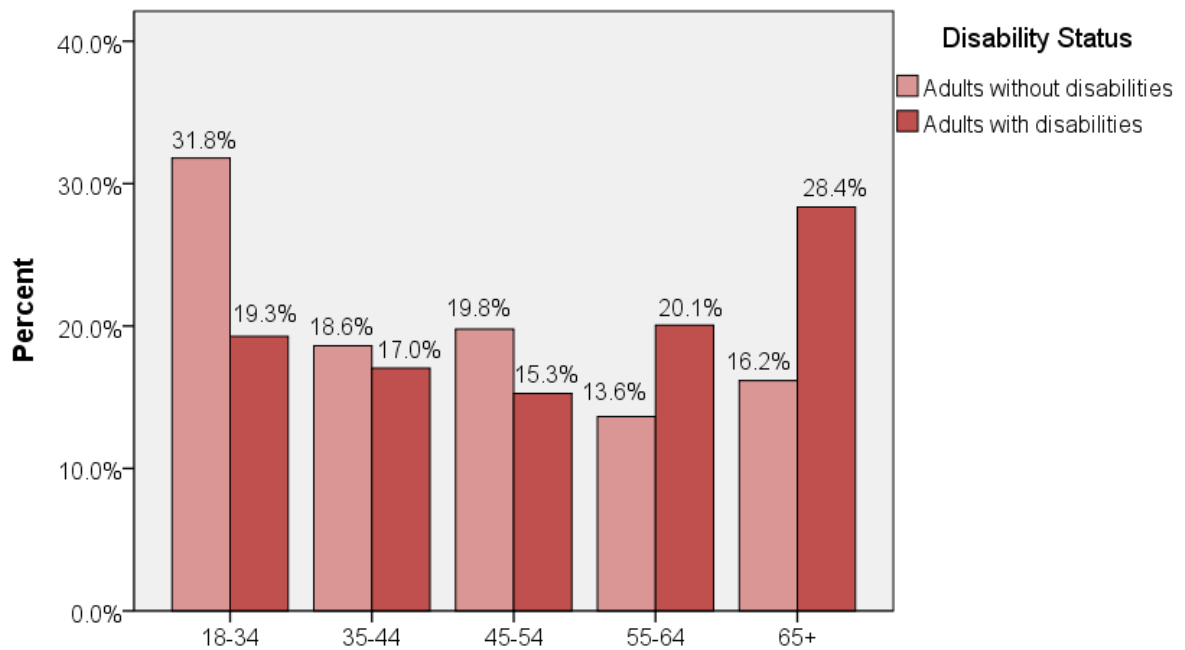


Figure 6. Marital status of adults with and without a disability

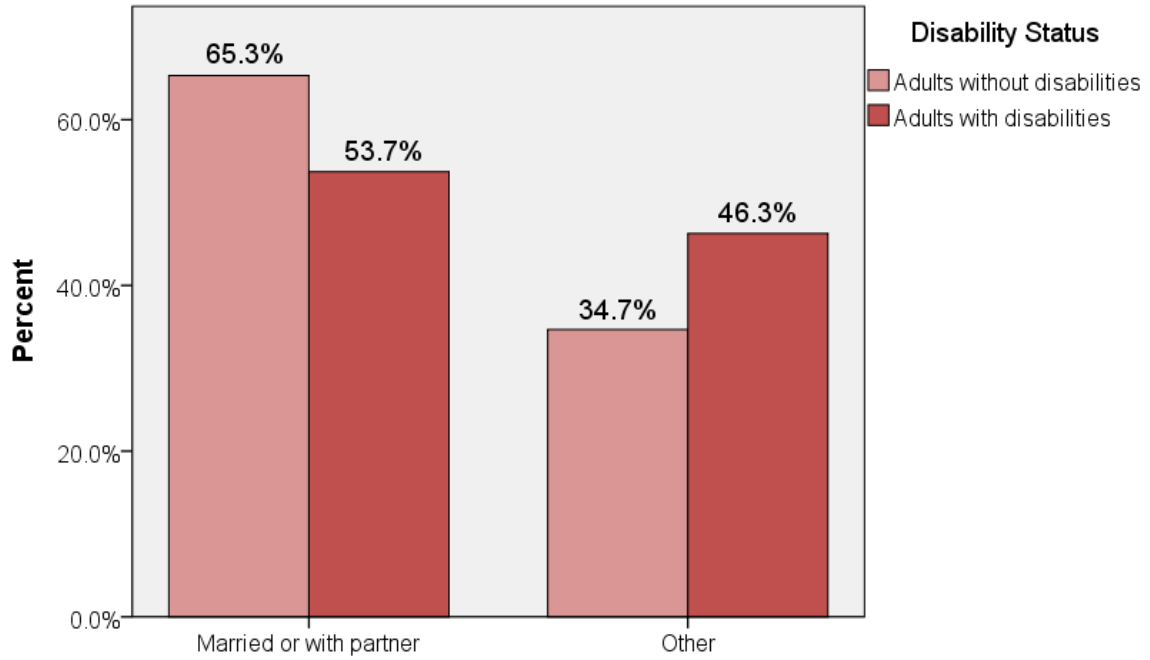


Figure 7. Race/Ethnicity of adults with and without a disability

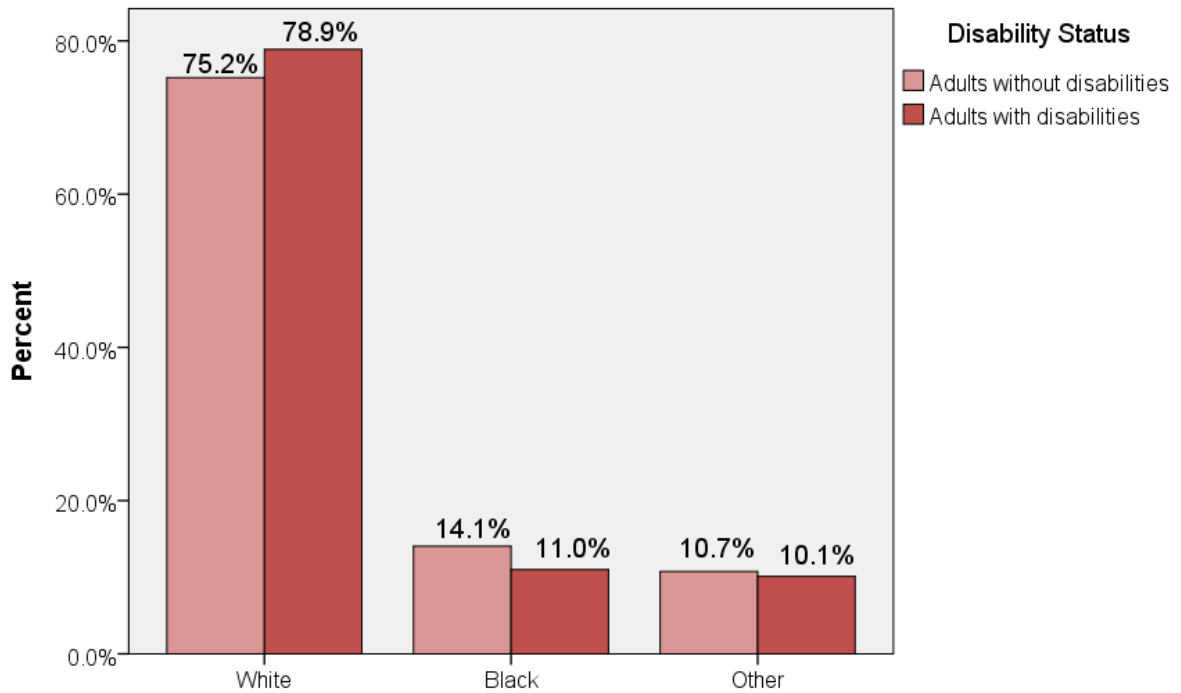


Figure 8. Employment of adults with and without a disability



Figure 9. Education of adults with and without a disability

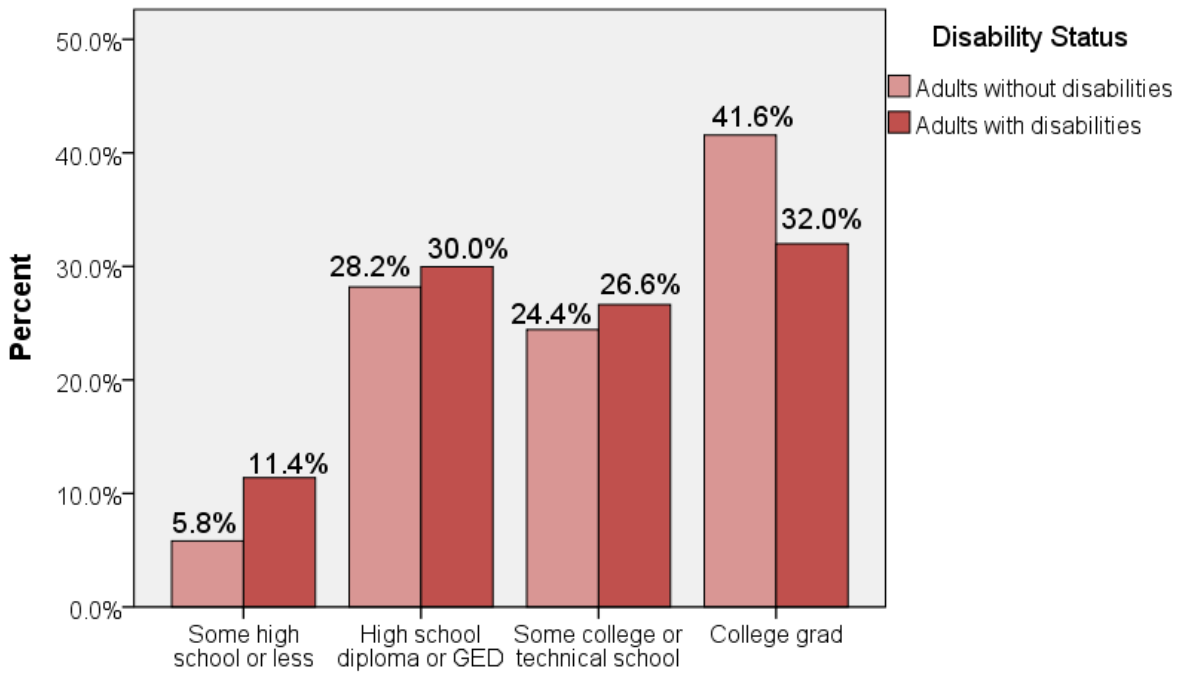
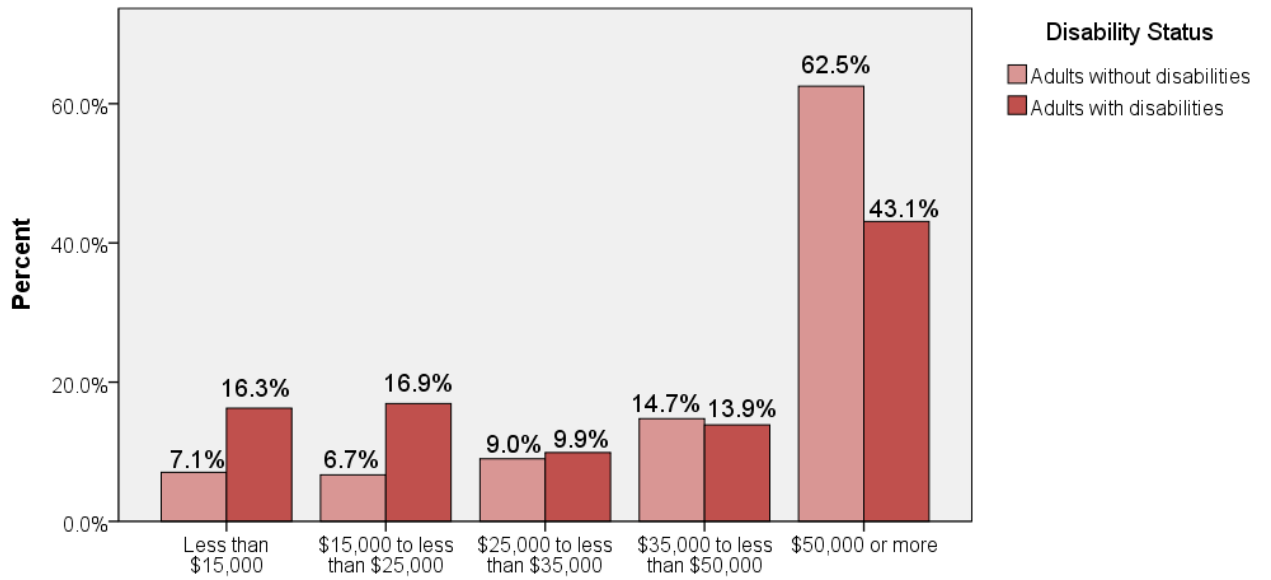




Figure 10. Income of adults with and without a disability



## **Health Status**

This section describes health status among adults with and without disabilities. Health status was assessed through questions about general health, the number of days of poor physical or mental health in the last thirty days, body weight and height (which were combined to indicate body mass index [BMI]), and overall satisfaction with life.

### ***General health***

Sixty-one percent (61.0%) of respondents who reported having a disability reported their general health status as being excellent, very good, or good. Ninety-four percent (93.6%) of respondents who reported not having a disability reported their general health status as being excellent, very good, or good. Thirty-nine percent (39.0%) of adults who reported having a disability indicated that their health status was fair or poor compared to 6.4% of respondents who did not report having a disability.

### ***Number of days of poor physical or mental health***

Twenty-nine percent (29.3%) of adults who reported having a disability indicated that they had poor physical or mental health for one week or more within the last 30 days. Of respondents who did not report having a disability, 3.1% reported having poor physical or mental health for one week or more within the last 30 days.

### ***Body Mass Index (BMI)***

The CDC has established guidelines for a healthy weight range according to a person's height. Overweight and obesity are both labels for ranges of weight that are greater than what is generally considered healthy. Both overweight and obesity can be measured using body mass index, also known as a person's BMI. Overweight for an adult is defined as a body mass index in the range of 25 to 29.9. Obesity for an adult is having a body mass index of 30 or higher (CDC, 2010).

Of respondents with a disability, 39.1% reported being obese compared to 24.7% of respondents without a disability. Twenty-nine percent (28.8%) of adults with disabilities reported being overweight compared to 37.9% of adults without disabilities. Thirty-two percent (32.2%) of adults with disabilities reported being neither overweight nor obese compared to 37.4% of adults without disabilities.

Table 3. Health status among adults with and without a disability

Health Status			
Variable	Categories	Without a Disability	With a Disability
General health status	Excellent, very good, good	93.6%	61.0%
	Fair, poor	6.4%	39.0%
Poor physical or mental health for 1 week or more in last 30 days	Yes	3.1%	29.3%
	No	96.9%	70.7%
Body mass index (BMI)	Neither overweight nor obese	37.4%	32.2%
	Overweight	37.9%	28.8%
	Obese	24.7%	39.1%

Figure 11. General health status among adults with and without a disability

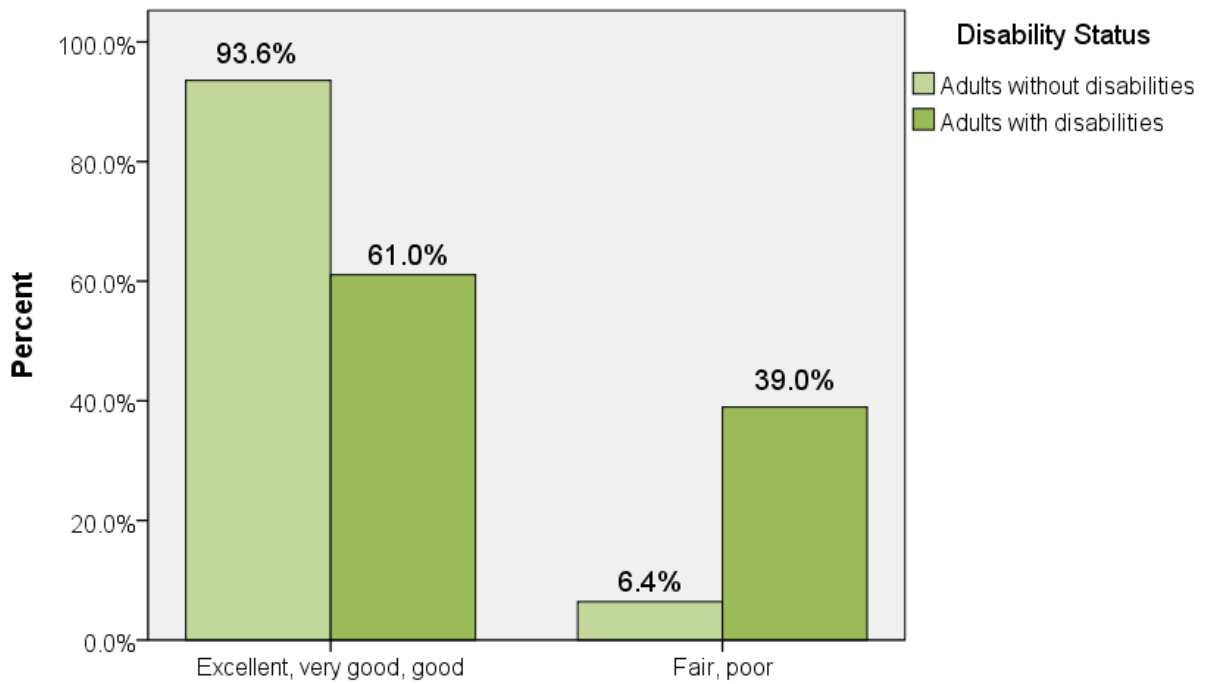


Figure 12. Poor physical or mental health for 1 week or more in last 30 days among adults with and without a disability

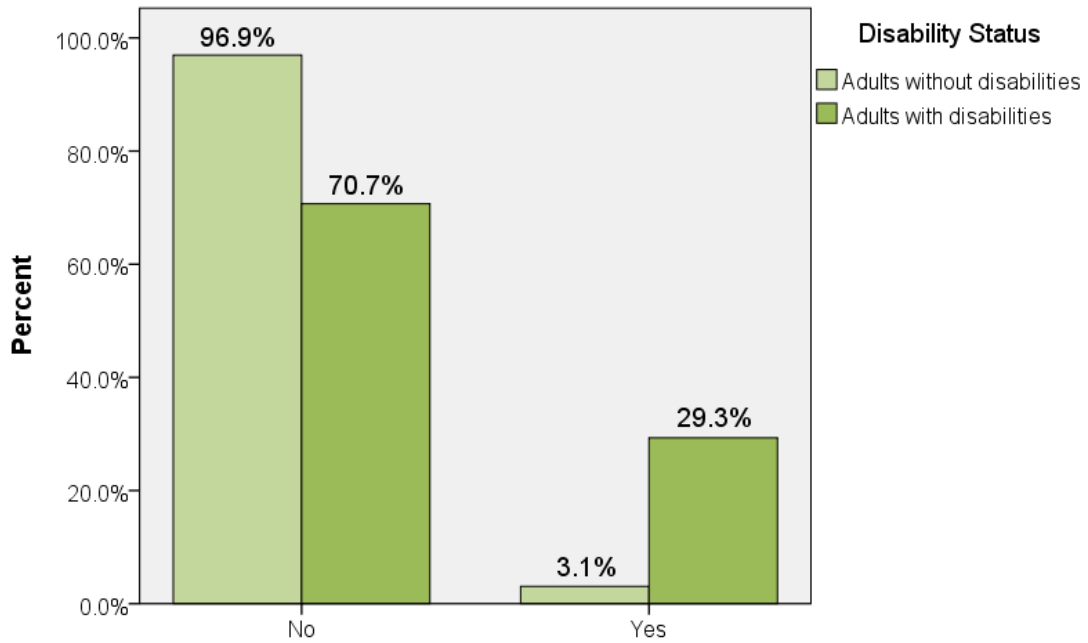
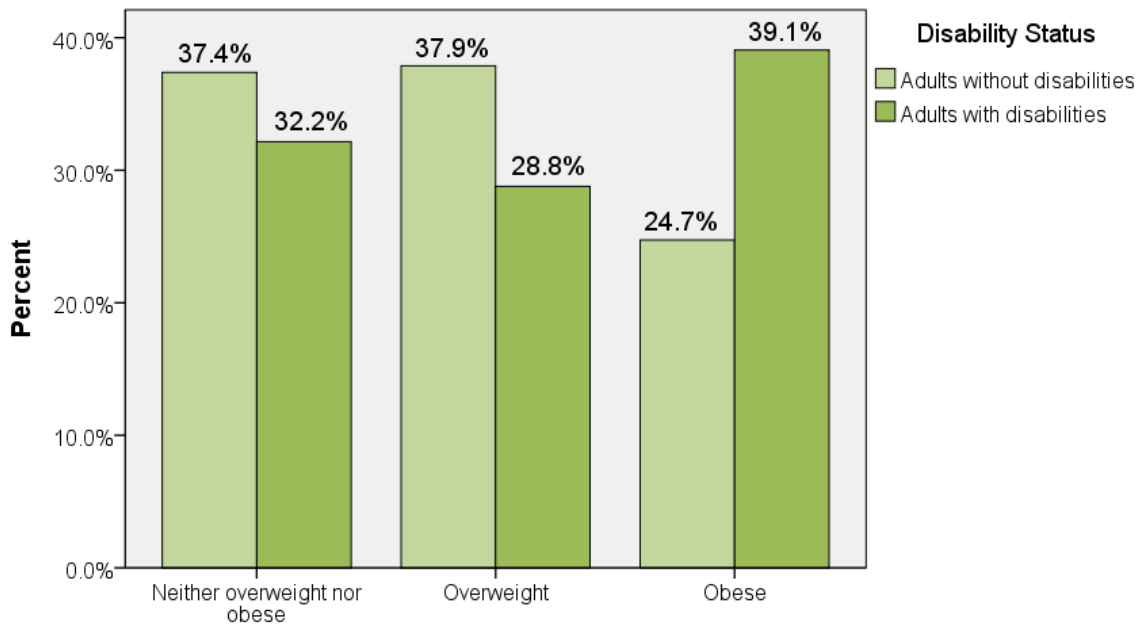


Figure 13. Body mass index (BMI) of adults with and without a disability



### Mental Health and Life Satisfaction

Respondents were asked how often they receive social and emotional support when they need it. Seventy-three percent (72.8%) of respondents with a disability reported getting the emotional support they need always or usually. Eighty-five percent (85.4%) of respondents without a disability reported getting the social or emotional support they need always or usually.

Of those adults who reported having a disability, 12.6% indicated that they are dissatisfied with their life compared to 2.9% of respondents who did not report having a disability.

Table 4. Mental health and life satisfaction among adults with and without a disability

Mental Health and Life Satisfaction			
Variable	Categories	Without a Disability	With a Disability
Emotional support	Always, usually	85.4%	72.8%
	Sometimes, rarely, never	14.6%	27.2%
Satisfaction with life	Yes	97.1%	87.4%
	No	2.9%	12.6%

Figure 14. Adults with and without a disability who receive emotional support

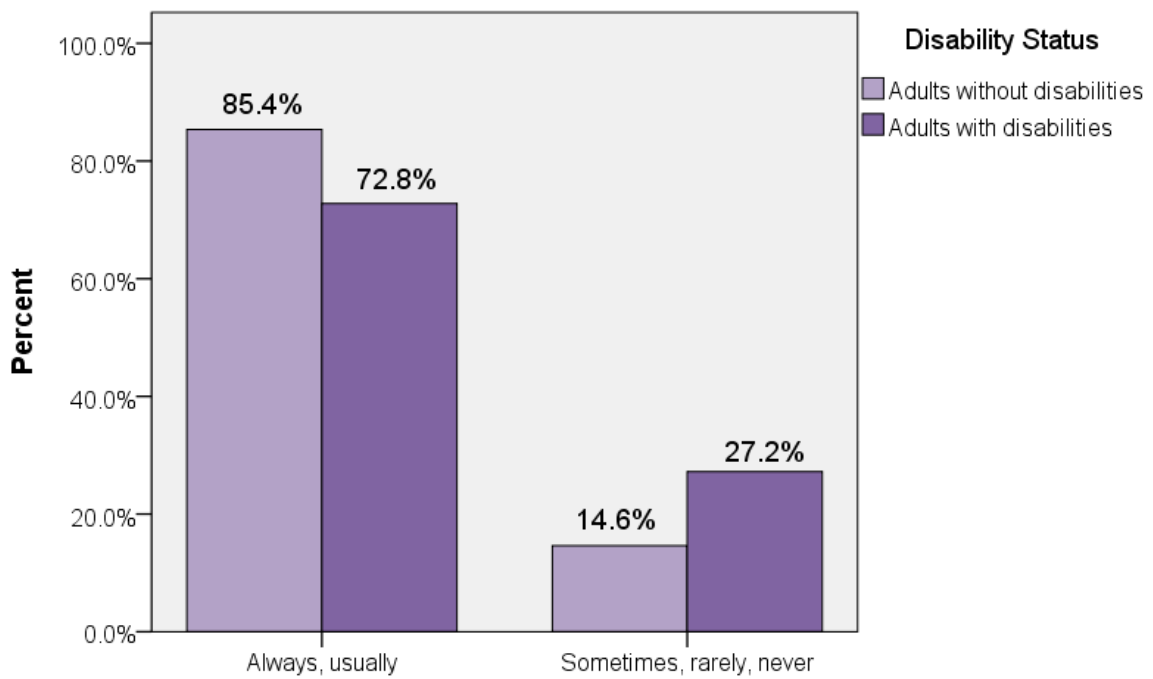
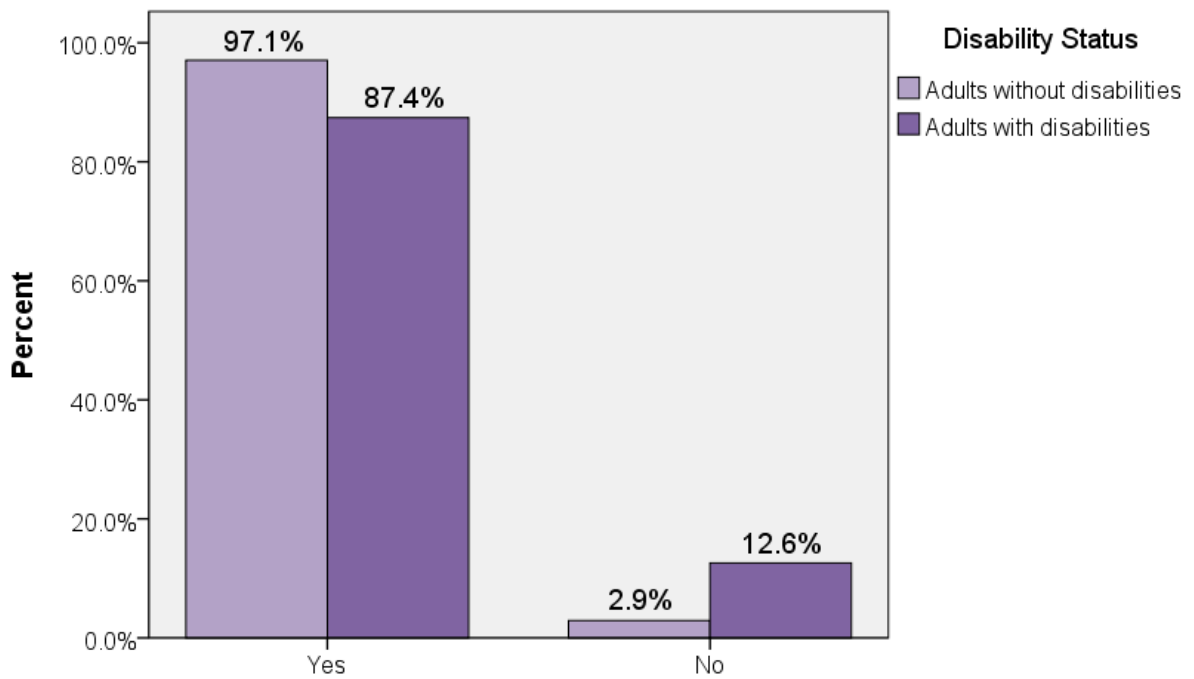


Figure 15. Adults with and without a disability who are satisfied with life



## **Access to Services**

This section describes access to services among adults with and without disabilities. Questions asked each respondent about health care coverage, access to health care professionals, affordability of health services, and the timing of their last checkup with a doctor.

### ***Health Care Coverage, Affordability, and Doctor Visits***

Ninety-one percent (91.3%) of respondents under age 65 with disabilities reported having health care coverage. Eighty-eight percent (88.0%) of respondents under age 65 without disabilities indicated that they had health care coverage.

Ninety-one percent (90.5%) of adults with disabilities indicated having a personal doctor or health care professional. Ninety percent (89.6%) of adults without disabilities indicated having a personal doctor or health care professional.

Participants were asked if there was a time in the last 12 months when they were unable to see a doctor because of cost. Fifteen percent (15.4%) of participants with disabilities reported having this experience. Ten percent (9.7%) of participants without disabilities reported having this experience.

Finally, of respondents with disabilities, 87.6% reported having a physical check-up in the last twelve months. Seventy-seven percent (77.3%) of respondents without disabilities reported having a physical check-up in the last year.

Table 5. Access to services among adults with and without a disability

Access to Services			
Variable	Categories	Without a Disability	With a Disability
Have any health care coverage (Under 65)	Yes	88.0%	91.3%
	No	12.0%	8.7%
Have any health care professional	Yes	89.6%	90.5%
	No	10.4%	9.5%
Could not see doctor because of cost	Yes	9.7%	15.4%
	No	90.3	84.6%
Routine physical check-up within 12 months	Yes	77.3%	87.6%
	No	22.7%	12.4%

Figure 16. Adults with and without a disability who have any health care coverage

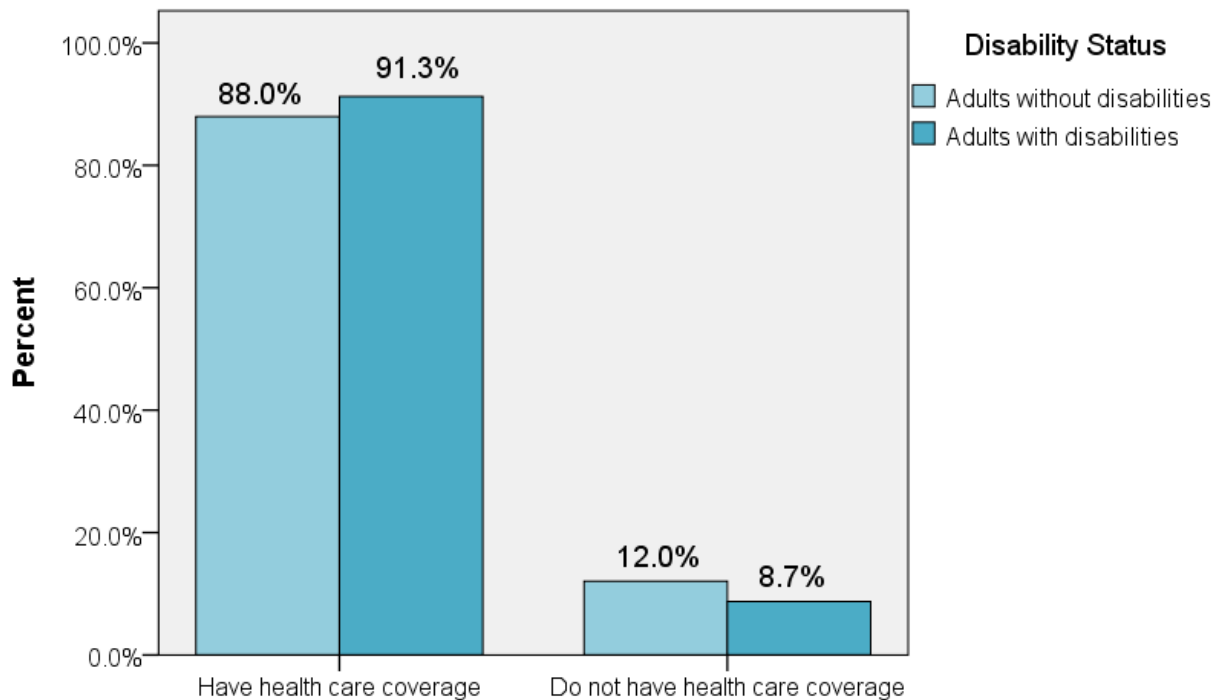




Figure 17. Adults with and without a disability who indicated they have a health care professional

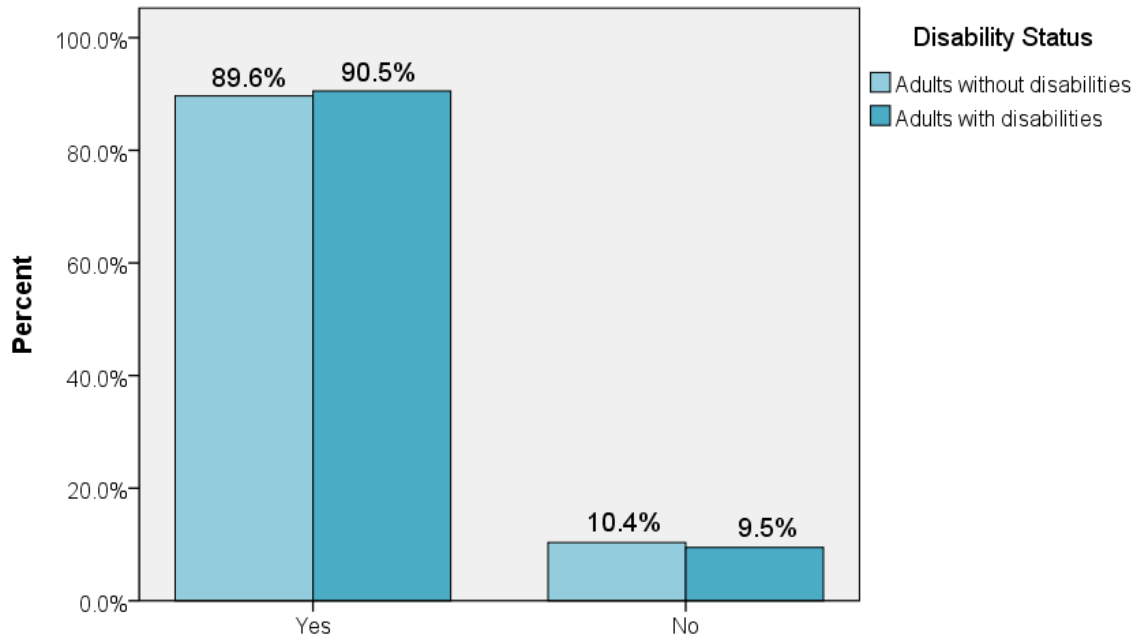


Figure 18. Adults with and without a disability who could not see a medical doctor because of cost

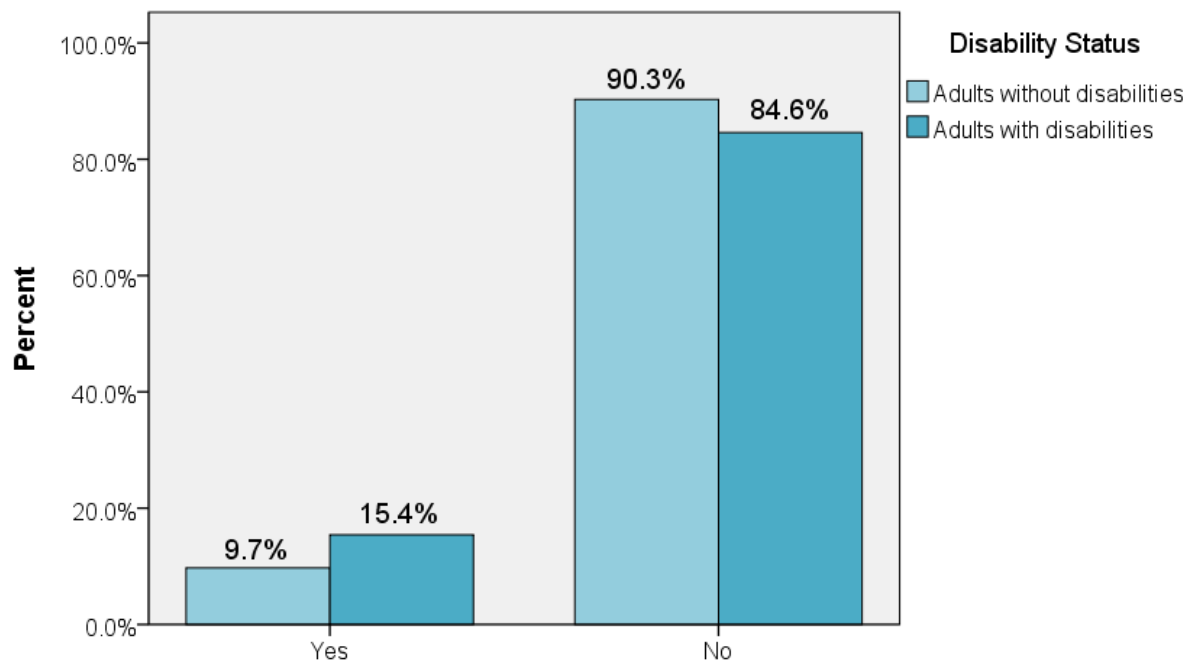
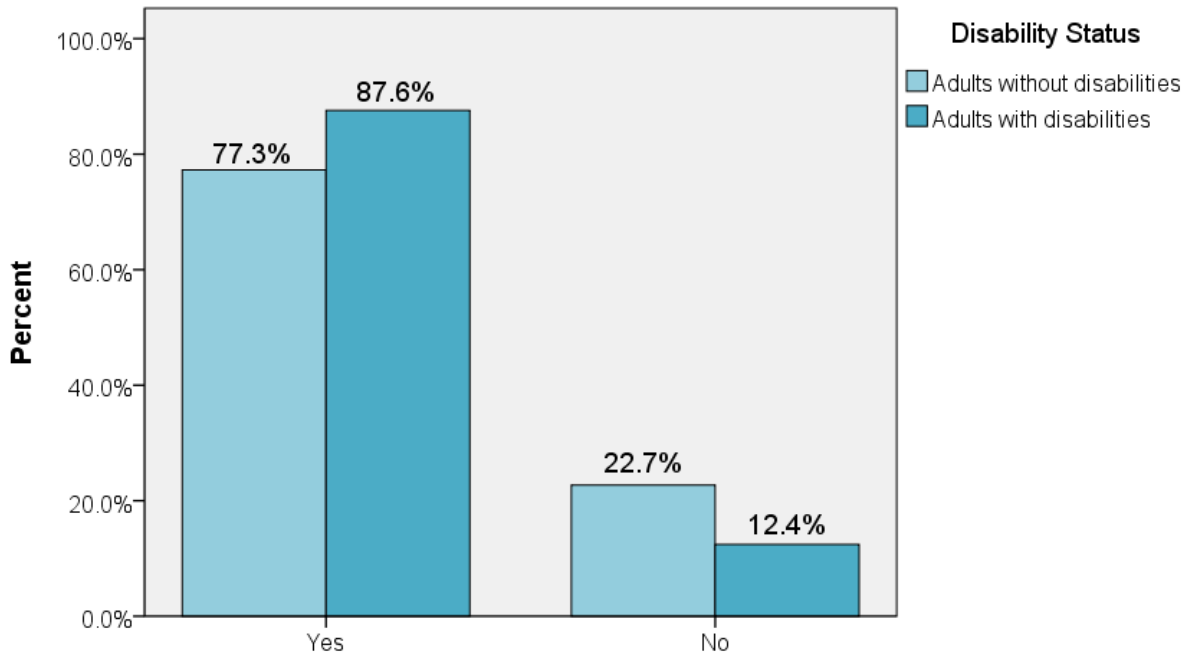


Figure 19. Adults with and without a disability that received a routine check-up within the past 12 months



## **Lifestyle: Exercise & Nutrition**

This section describes lifestyle choices and nutrition intake among adults with and without disabilities. These topics were assessed through questions that asked each respondent about physical and dietary habits.

### ***Physical Activity***

An active lifestyle contributes to better health outcomes for all adults. According to the 2008 Physical Activity Guidelines for Americans, physical activity is any form of exercise or movement of the body that uses energy (US DHHS, 2008). In 2009, 21.0% of adults with disabilities indicated that they had not participated in any physical activity or exercise within the past 30 days, compared to 8.5% of respondents who did not report having a disability. Of respondents that reported having a disability, 42.5% reported meeting established national guidelines for physical activity. Of respondents that did not report having a disability, 52.9% reported meeting the established national guidelines for physical activity.

### ***Nutrition***

The proper balance of nutrition and physical activity is essential to a healthy lifestyle. The U.S. Department of Agriculture creates Dietary Guidelines with the goal of promoting healthy eating and physical activity choices and improving the health of all Americans. The most recent national guidelines were introduced in December 2010 and provide some updated suggestions from the guidelines developed in 2005 (USDA, 2010). However, nutritional data from this report were analyzed with the 2005 Dietary Guidelines.

According to the 2005 Dietary Guidelines for Americans, five servings of fruits and vegetables per day are recommended for a reference 2,000-calorie intake, with higher or lower amounts depending on the calorie level (US DHHS, 2009). Seventy-three percent (72.6%) of respondents with a disability did not meet this recommendation. Seventy-six percent (75.6%) of respondents without a disability indicated that they did not meet this recommendation.

Table 6. Lifestyle: Exercise and nutrition among adults with and without a disability

Lifestyle			
Variable	Categories	Without a Disability	With a Disability
Meeting physical activity recommendations	Meet physical activity recommendations	52.9%	42.5%
	Insufficient physical activity	38.6%	36.5%
	No physical activity	8.5%	21.0%
Physical activity or any exercise, past 30 days	Yes	91.5%	79.0%
	No	8.5%	21.0%
Has the recommended 5+ daily servings of fruits or vegetables	Yes	24.4%	27.4%
	No	75.6%	72.6%

Figure 20. Adults with and without a disability who met physical activity recommendations

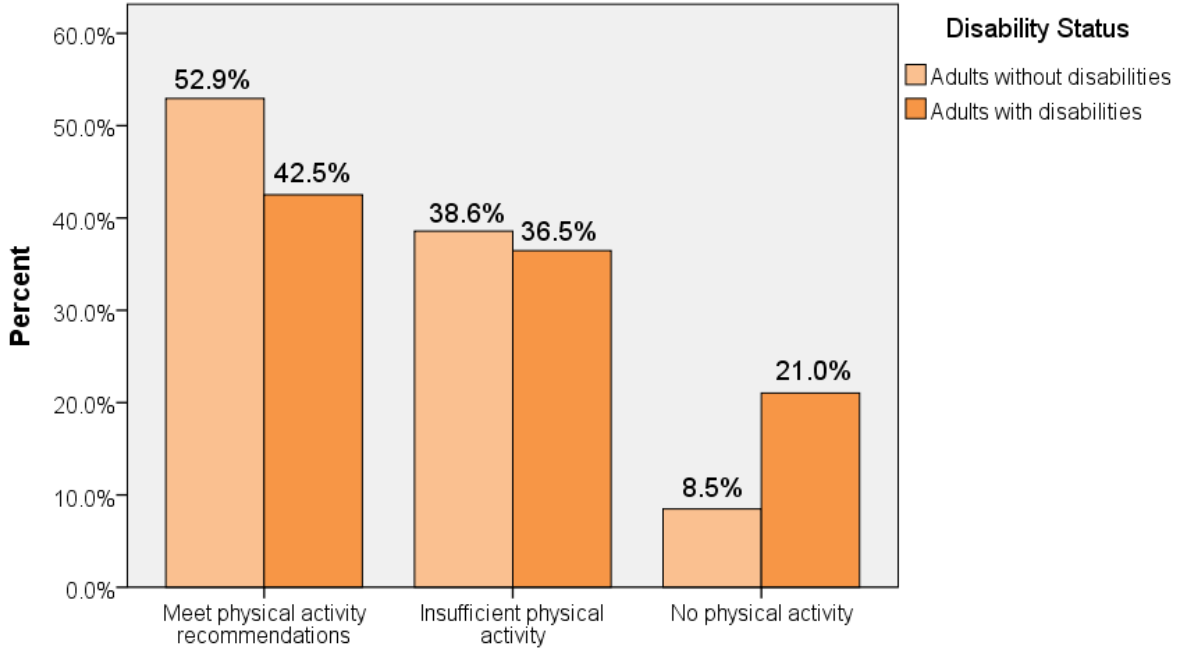
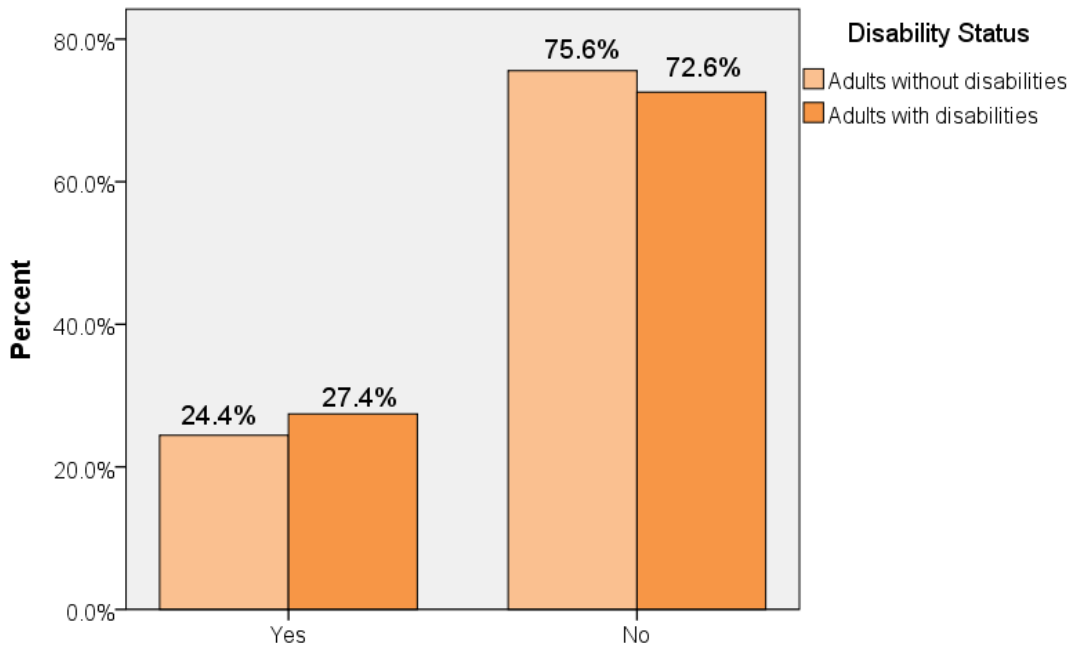


Figure 21. Adults with and without a disability who met the recommended serving of fruits and vegetables



## Health Risk Behaviors: Smoking & Alcohol Consumption

This section describes health risk behaviors related to smoking use and alcohol consumption.

### Smoking

According to the CDC, tobacco use is the single most preventable cause of disease, disability, and death in the United States (CDC, 2004). Each year, an estimated 443,000 adults die prematurely from smoking or exposure to secondhand smoke, and another 8.6 million have a serious illness caused by smoking. Twenty-three percent (23.3%) of adults with disabilities in Delaware indicated that they are current smokers.

Seventeen percent (17.1%) of adults without disabilities indicated that they are current smokers. Thirty-four percent (34.2%) of adults that reported having a disability also reported being a former smoker. Twenty-seven percent (26.9%) of adults that did not report having a disability reported being a former smoker. Forty-three percent (42.5%) of respondents with disabilities indicated they had never smoked, compared to 56.0% of respondents without disabilities.

### Alcohol consumption

Binge drinking is defined for males as having 5 or more drinks on one occasion and for females as having four or more drinks on one occasion (NIAAA, 2004). When asked about alcohol consumption, 10.8% of respondents with a disability reported participating in binge drinking. Of respondents without a disability, 20.5% reported participating in binge drinking.

Table 7. Health risk behaviors among adults with and without a disability

Health Risk Behaviors			
Variable	Categories	Without a Disability	With a Disability
Smoking Status	Current Smoker	17.1%	23.3%
	Former Smoker	26.9%	34.2%
	Never Smoked	56.0%	42.5%
Binge Drinking	Yes	20.5%	10.8%
	No	79.5%	89.2%

Figure 22. Smoking status among adults with and without a disability

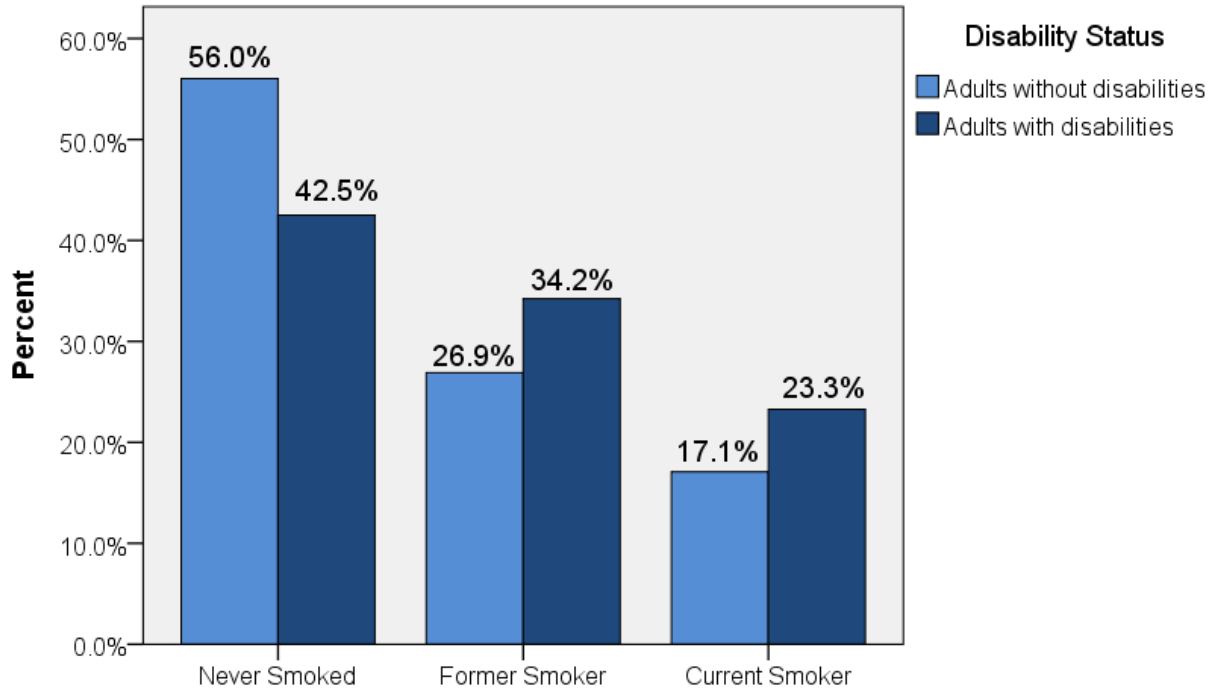
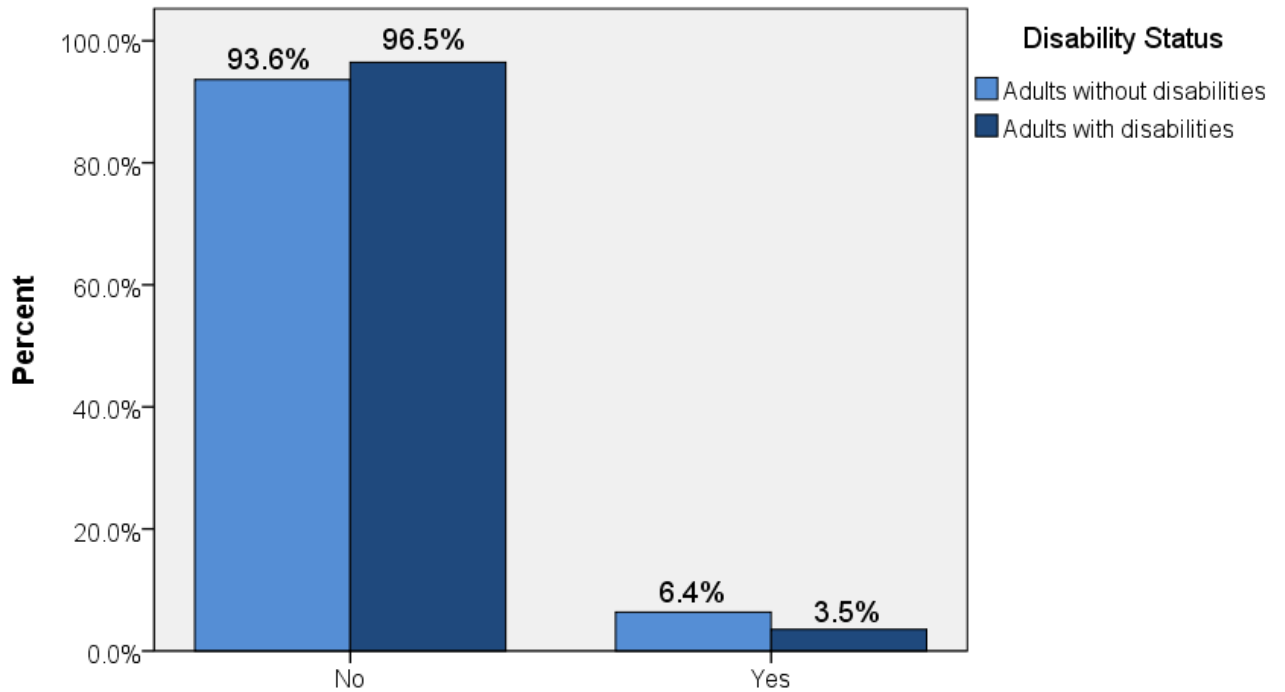


Figure 23. Binge drinking among adults with and without a disability



## **Secondary Conditions: Asthma, Arthritis, Cholesterol, Blood Pressure, Diabetes, & Heart Disease**

Some disabilities increase the risk of developing other health problems, such as hypertension and diabetes. Kinne, Patrick, and Doyle (2004) found that 87% of people with disabilities reported at least one health condition, while only 49% of people without disabilities reported a health condition. This section describes the prevalence of these health conditions among adults with and without disabilities.

### ***Asthma***

Asthma is a chronic inflammatory disorder of the airways. It causes restricted breathing, pain, and discomfort for many Delawareans (NHLBI, 2007). Of respondents who reported having a disability, 23.3% indicated that they had ever been told that they have asthma compared to 12.1% of respondents who did not report having a disability.

### ***Arthritis***

According to Hootman, Bolen, Helmick and Langmaid (2006), arthritis is the most common cause of disability in the United States, limiting the activities of nearly 19 million adults (Hootman et al., 2006). Of respondents who reported having a disability, 54.5% indicated that they had been told that they have arthritis compared to 20.9% of adults who did not report having a disability.

### ***Cholesterol Testing***

The majority of Delawareans (81.3%) with and without disabilities reported having their cholesterol levels tested within the last five years. Of respondents who reported having a disability, 86.9% reported having their cholesterol levels tested in the last 5 years. Of respondents who did not report having a disability, 79.9% reported having their cholesterol levels tested in the last 5 years. Results indicating a respondent's cholesterol level were not reported.

### ***Blood Pressure***

According to the National Heart, Lung and Blood Institute, an estimated 1 in 3 American adults has high blood pressure. Having high blood pressure increases one's chance for developing secondary conditions such as heart disease, stroke, and other serious conditions (NHLBI, 2009). Of respondents with a disability, 44.4% indicated that they were told that they have high blood pressure compared to 27.4% of adults who did not report having a disability.



**Diabetes**

Between 1995 and 2007, the prevalence of diabetes in Delaware has more than doubled, climbing from 4.3% to nearly 9% (DHSS, 2009). Sixteen percent (15.5%) of adults who reported having a disability indicated that they were told by a doctor that they had diabetes compared to 5.3% of adults who did not report having a disability. Of individuals who reported having a disability, 5.9% reported being diagnosed with diabetes before age 45. Two percent (1.7%) of individuals without a disability reported being diagnosed with diabetes before age 45.

Of respondents who reported having a disability, 65.1% indicated that they had a test for high blood sugar within the past three years compared to 56.3% of respondents who did not report having a disability.

**Heart Health**

The CDC reports that heart disease is the leading cause of death in the United States and is a major cause of disability (Heron et al., 2009). Of respondents who reported having a disability, 10.3% indicated that they had been diagnosed with a heart attack compared to 3.0% of respondents who did not report having a disability. In addition, 10.6% adults who reported having a disability indicated that they had been diagnosed with angina or coronary heart disease compared to 2.2% of respondents who did not report having a disability.

Of respondents who reported having a disability, 7.5% reported having had a stroke compared to less than 2.0% (1.5%) of respondents who did not report having a disability.

Table 8. Secondary conditions among adults with and without a disability

Secondary Conditions			
Variable	Categories	Without a Disability	With a Disability
Ever told have asthma	Yes	12.1%	23.3%
	No	87.9%	76.7%
Ever told you have arthritis	Yes	20.9%	54.5%
	No	79.1%	45.5%
Cholesterol tested in last five years	Yes	79.9%	86.9%
	No	20.1%	13.1%
Ever told you have high blood pressure	Yes	27.4%	44.4%
	No	72.6%	55.6%
Ever told you have diabetes	Yes	5.3%	15.5%
	No	94.7%	84.5%
Had a test for high blood sugar in past three years	Yes	56.3%	65.1%
	No	43.7%	34.9%
Diagnosed with diabetes before age 45	Yes	1.7%	5.9%
	No	98.3%	94.1%
Ever diagnosed with a heart attack	Yes	3.0%	10.3%
	No	97.0%	89.7%
Ever diagnosed with heart disease	Yes	2.2%	10.6%
	No	97.8%	89.4%
Ever diagnosed with a stroke	Yes	1.5%	7.5%
	No	98.5%	92.5%

Figure 24. Adults with and without a disability who have ever been told they have asthma

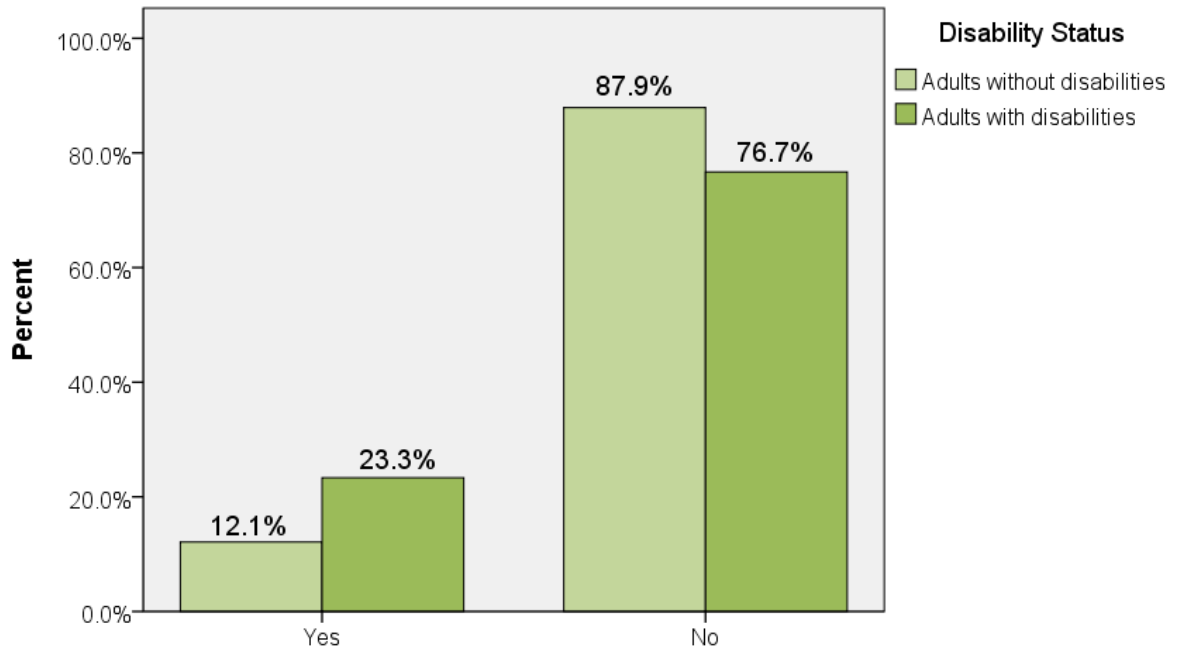


Figure 25. Adults with and without a disability who have ever been told they have arthritis

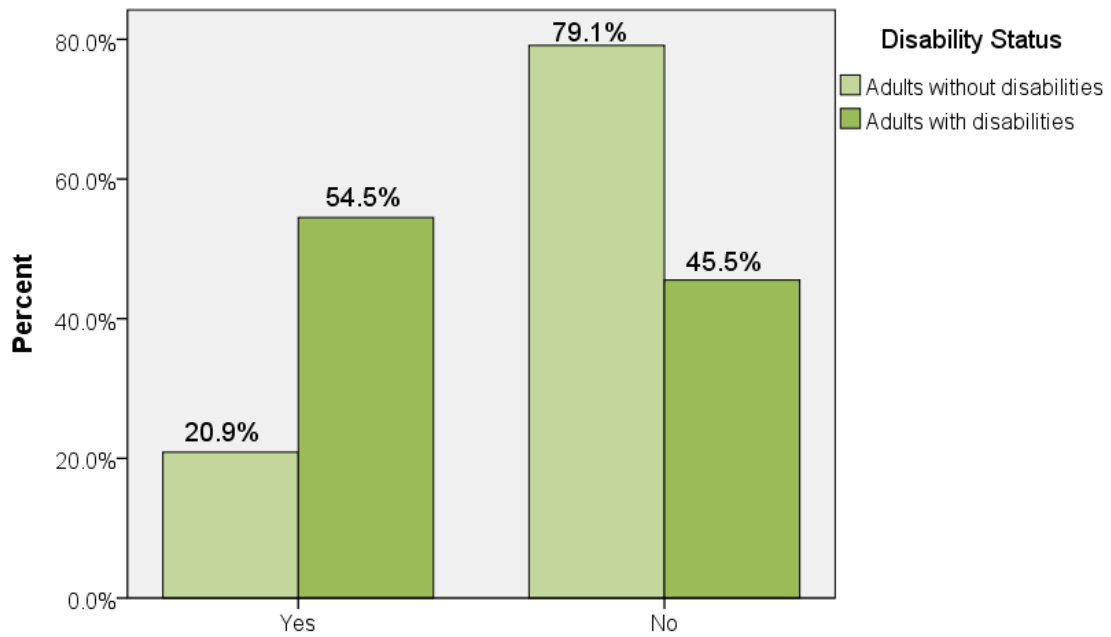


Figure 26. Adults with and without a disability who have been tested for cholesterol within the last five years

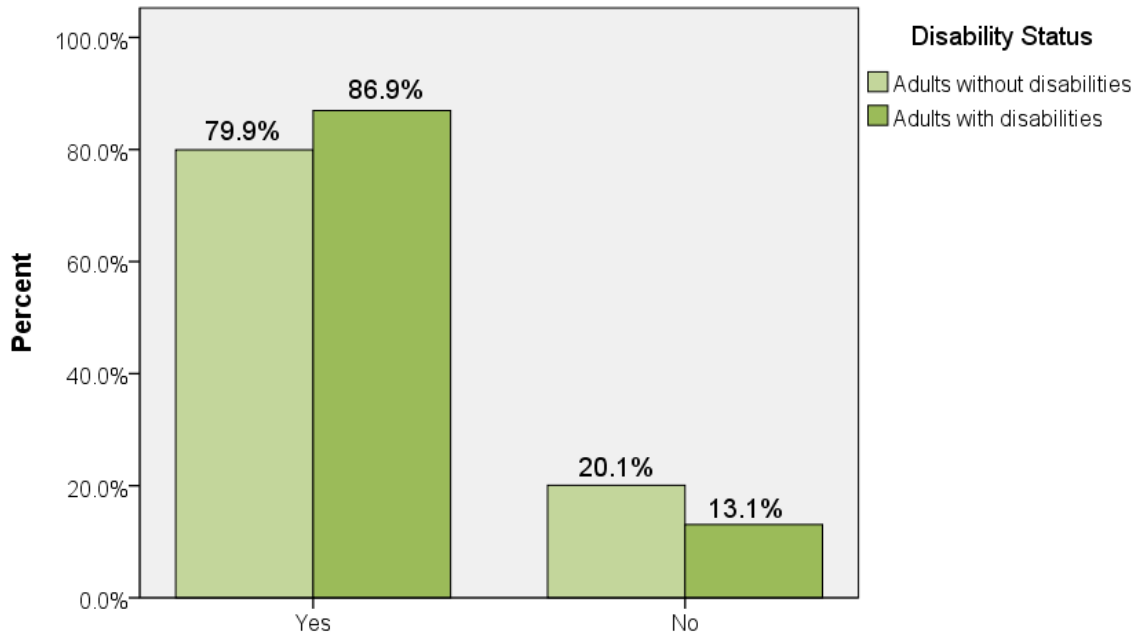


Figure 27. Adults with and without a disability who have been told they have high blood pressure

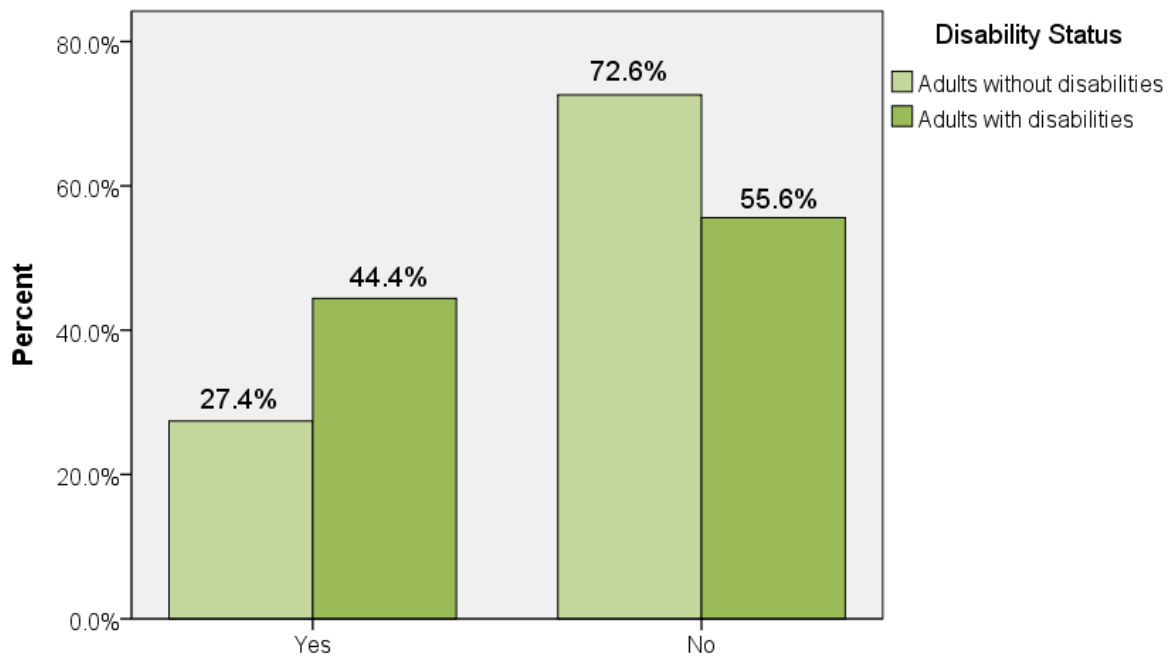


Figure 28. Adults with and without a disability who have been told they have diabetes

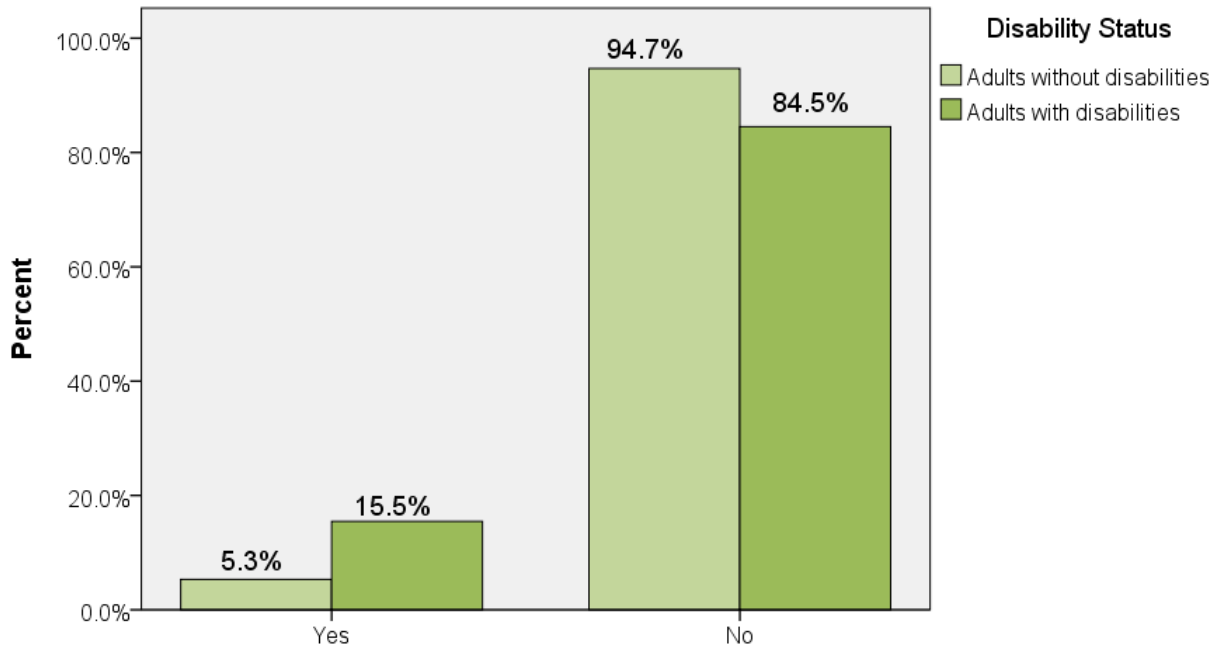


Figure 29. Adults with and without a disability who have been tested for high blood sugar within the past three years.

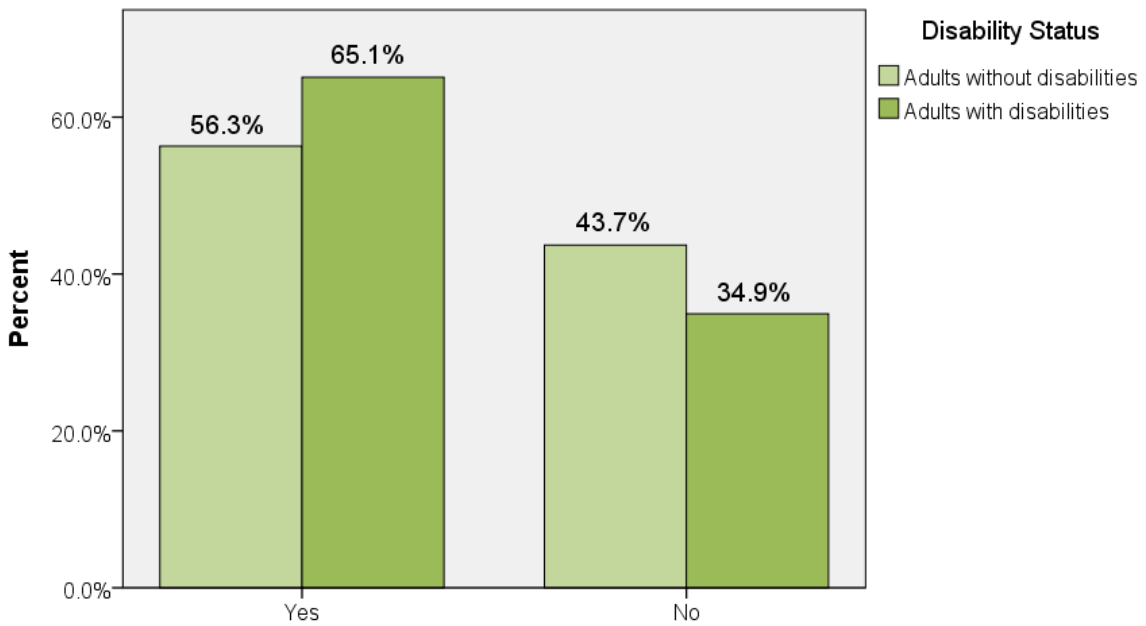


Figure 30. Adults with and without a disability who have been diagnosed with diabetes before age 45

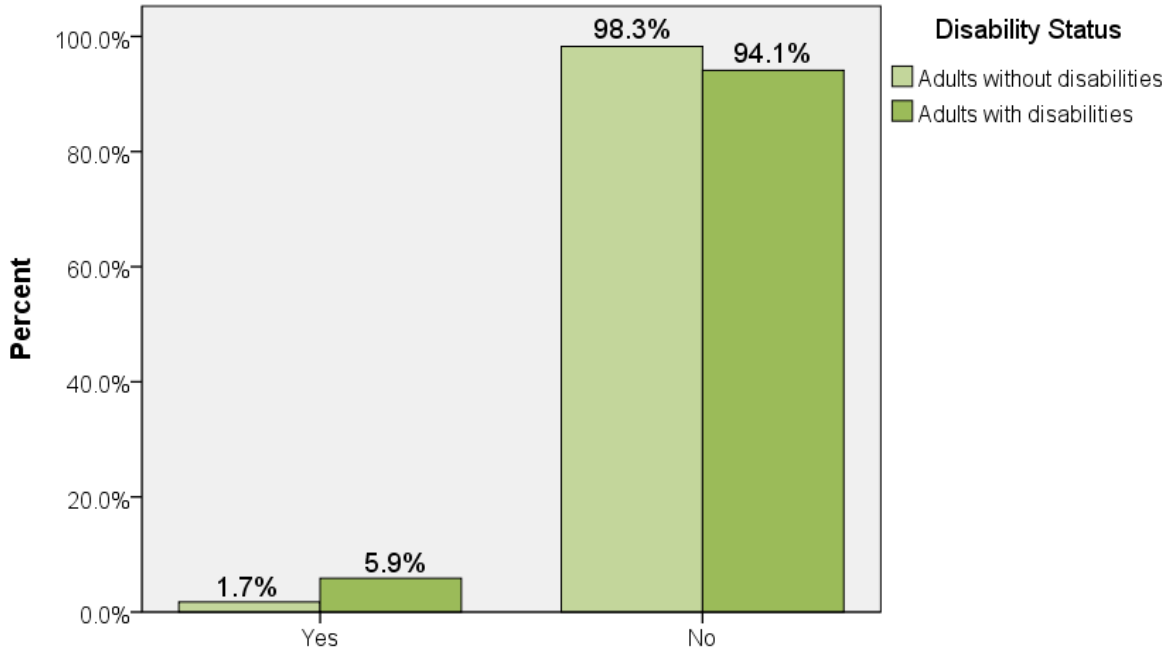


Figure 31. Adults with and without a disability who have ever been diagnosed with a heart attack

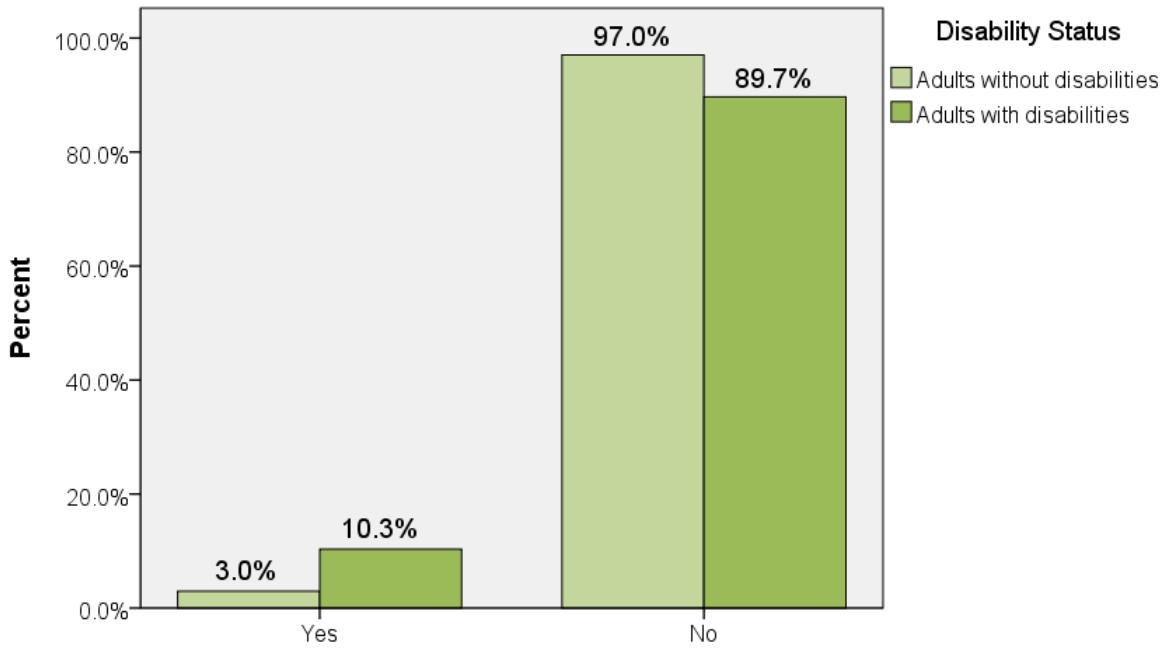


Figure 32. Adults with and without a disability who have ever been diagnosed with heart disease

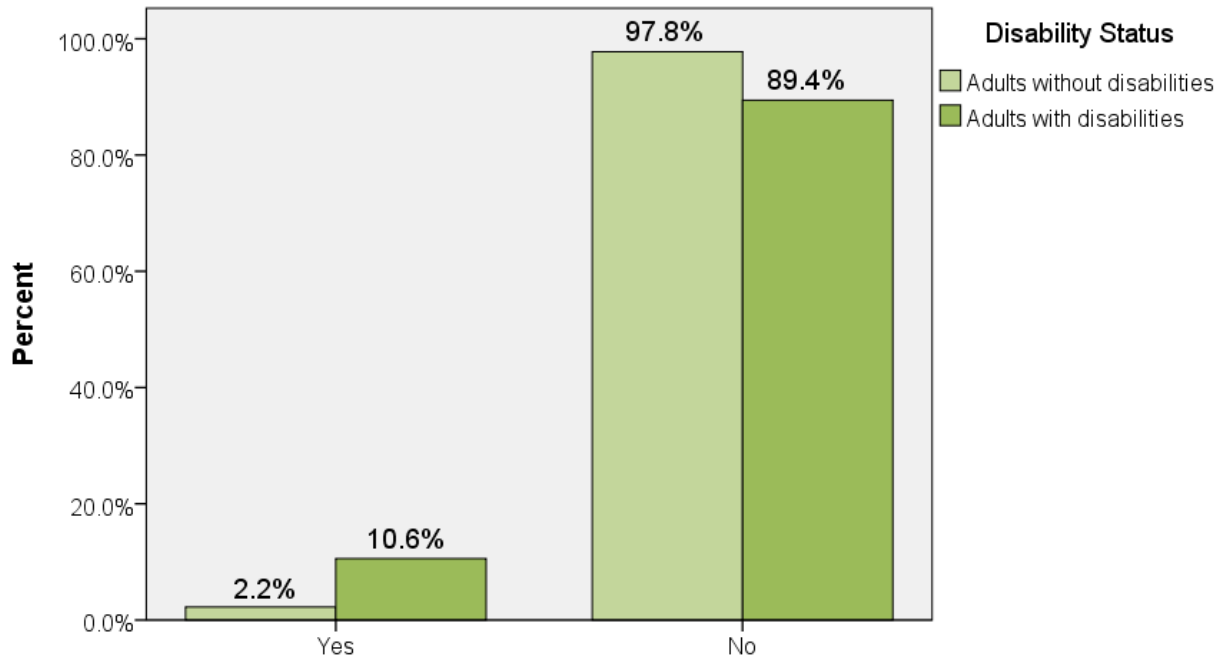
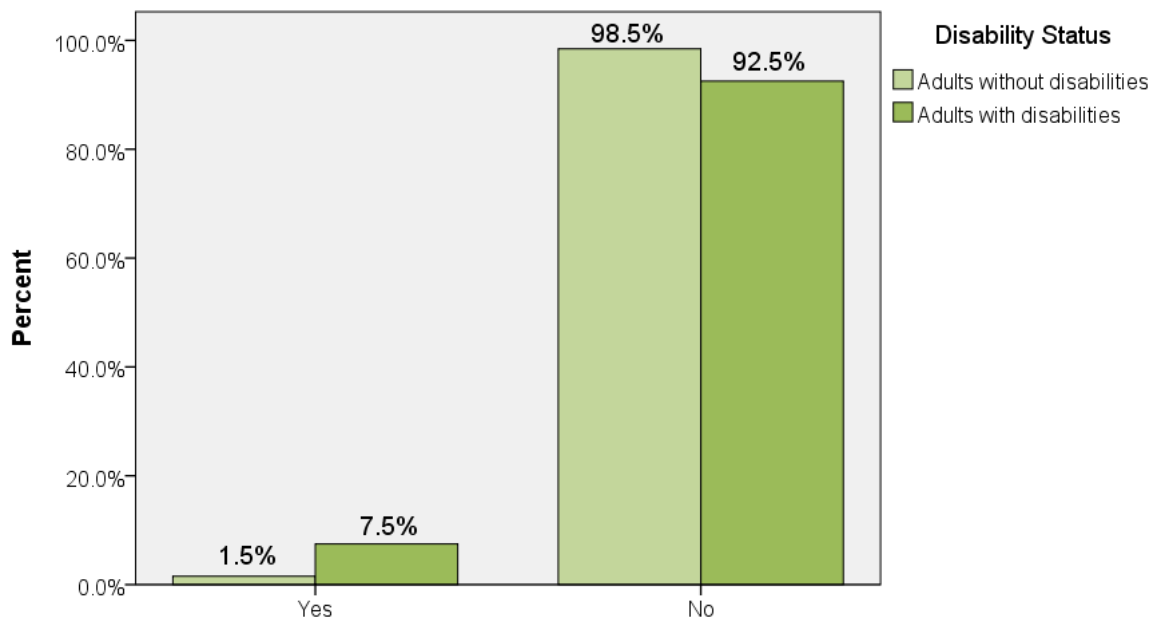


Figure 33. Adults with and without a disability who have ever been diagnosed with a stroke



## **Preventive Health and Screening**

This section analyzes data on preventive health measures taken by adults with and without disabilities.

### ***Men's Health***

Of men who reported having a disability 5.0% indicated that they were told they had prostate cancer compared to 4.5% of men who did not report having a disability.

### ***Colorectal Cancer Screening***

The CDC recommends that men and women should begin screening for colorectal cancer soon after turning 50 years old, and then continuing screening at regular intervals (U.S. Preventive Services Task Force, 2008). Of adults more than 50 years old who reported having a disability, 76.0% reported having a sigmoidoscopy or colonoscopy in their lifetime. Seventy-four percent (73.6%) of adults over 50 without a disability reported having a sigmoidoscopy or colonoscopy in their lifetime. Of adults who reported having a disability, 25.0% reported having a sigmoidoscopy or colonoscopy in the past year. Of adults who did not report having a disability, 22.9% reported having a sigmoidoscopy or colonoscopy in the past year.

Of respondents more than 40 years of age who reported having a disability, 71.7% reported ever having a digital rectal exam, compared to 71.3% of respondents without a disability. Of adults 40 years or older who reported having a disability, 41.3% indicated that they received a digital rectal exam within the past year compared to 38.3% of adults who did not report having a disability.

### ***Immunizations***

Vaccines prevent disease in adults who receive them and protect those who come into contact with unvaccinated individuals. Influenza can lead to complications such as pneumonia and bronchitis (CDC, 2009). Fifty-five percent (55.2%) of respondents with a disability indicated that they received a flu shot in the past twelve months. Thirty-eight percent (37.5%) of respondents without a disability indicated that they received a flu shot in the past year.

Of respondents with a disability 42.6% indicated that they had received a pneumococcal vaccination in their lifetime. Twenty-one percent (21.2%) of respondents without a disability indicated they had received a pneumococcal vaccination in their lifetime.



**HIV Testing**

Human immunodeficiency virus (HIV) is the cause of acquired immune deficiency syndrome, or AIDS. According to the CDC, at the end of 2006, an estimated 1.1 million persons in the United States were living with diagnosed or undiagnosed HIV/AIDS (CDC, 2008). In Delaware 54.3% of adults with a disability indicated that they had been tested for HIV compared to 48.0% of adults without a disability.

Table 9. Preventive health and screening among adults with and without a disability

Preventive Health and Screening			
Variable	Categories	Without a Disability	With a Disability
Ever told have prostate cancer	Yes	4.5%	5.0%
	No	95.5%	95.0%
If over 50, ever had a sigmoidoscopy/ colonoscopy	Yes	73.6%	76.0%
	No	26.4%	24.0%
If over 50, had a sigmoidoscopy/ colonoscopy in past 12 months	Yes	22.9%	25.0%
	No	77.1%	75.0%
Received flu shot within past 12 months	Yes	37.5%	55.2%
	No	62.5%	44.8%
Ever received a pneumonia shot	Yes	21.2%	42.6%
	No	78.8%	57.4%
Ever tested for HIV	Yes	48.0%	54.3%
	No	52.0%	45.7%

Figure 34. Men with and without a disability who have ever been told they have prostate cancer

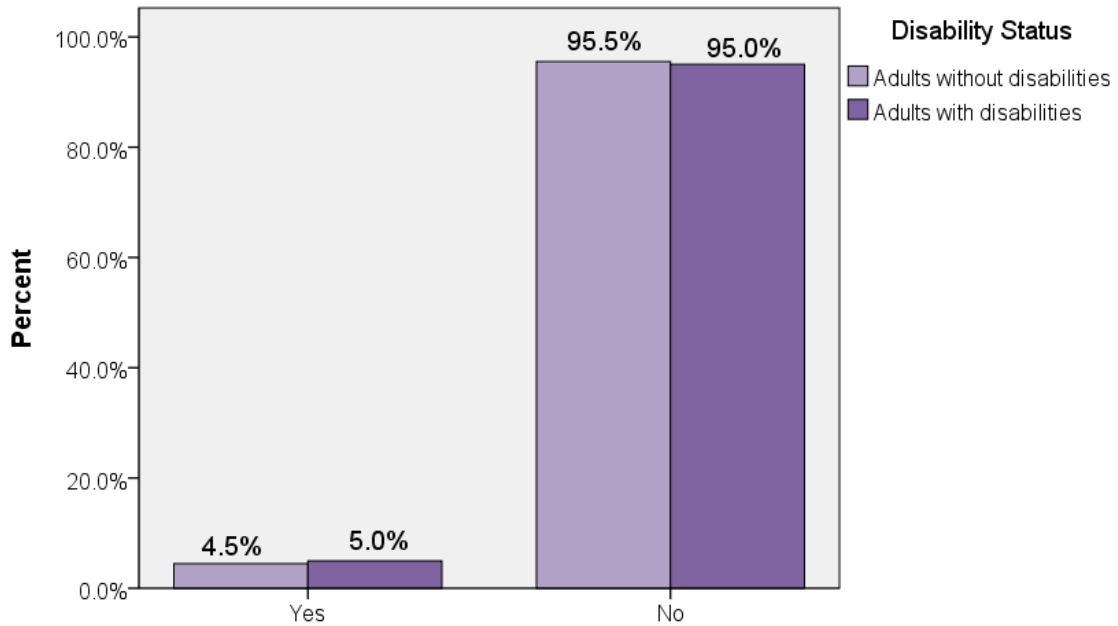


Figure 35. Adults with and without a disability who are over 50 and who have ever had a sigmoidoscopy/colonoscopy

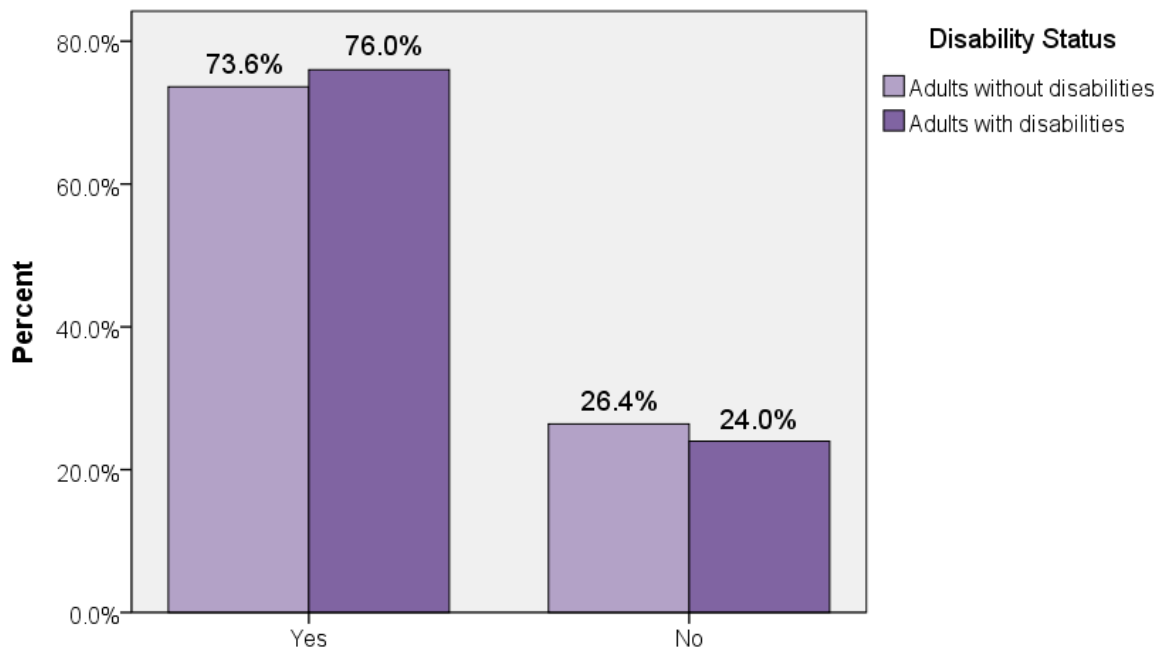


Figure 36. Adults with and without a disability who are over 50 and who have had a sigmoidoscopy/colonoscopy in the past 12 months

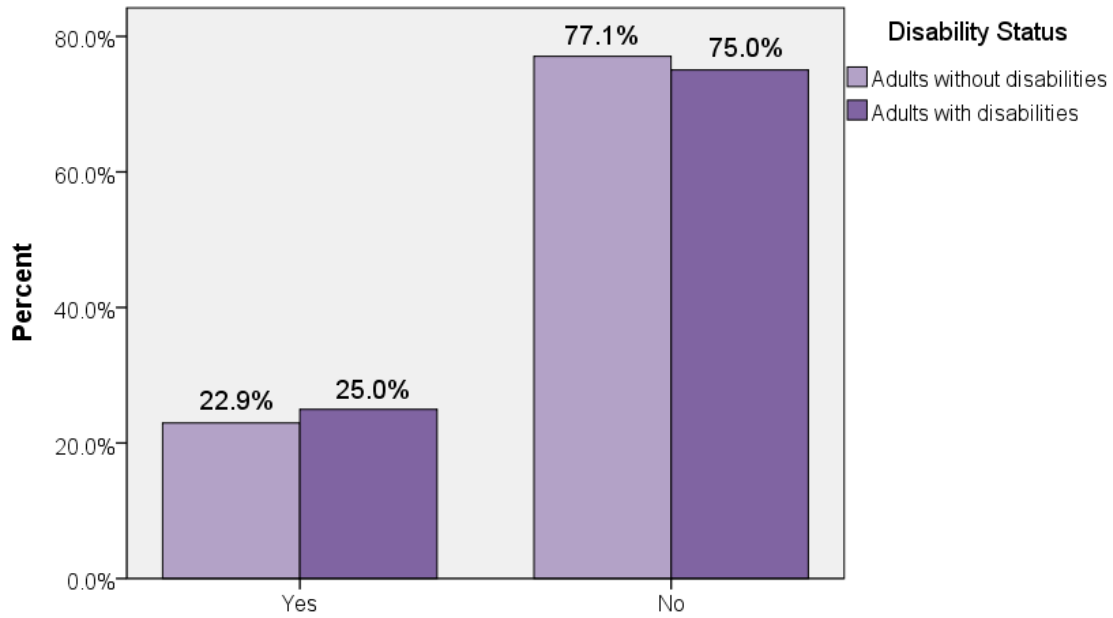


Figure 37. Adults with and without a disability who have received a flu shot within the past 12 months

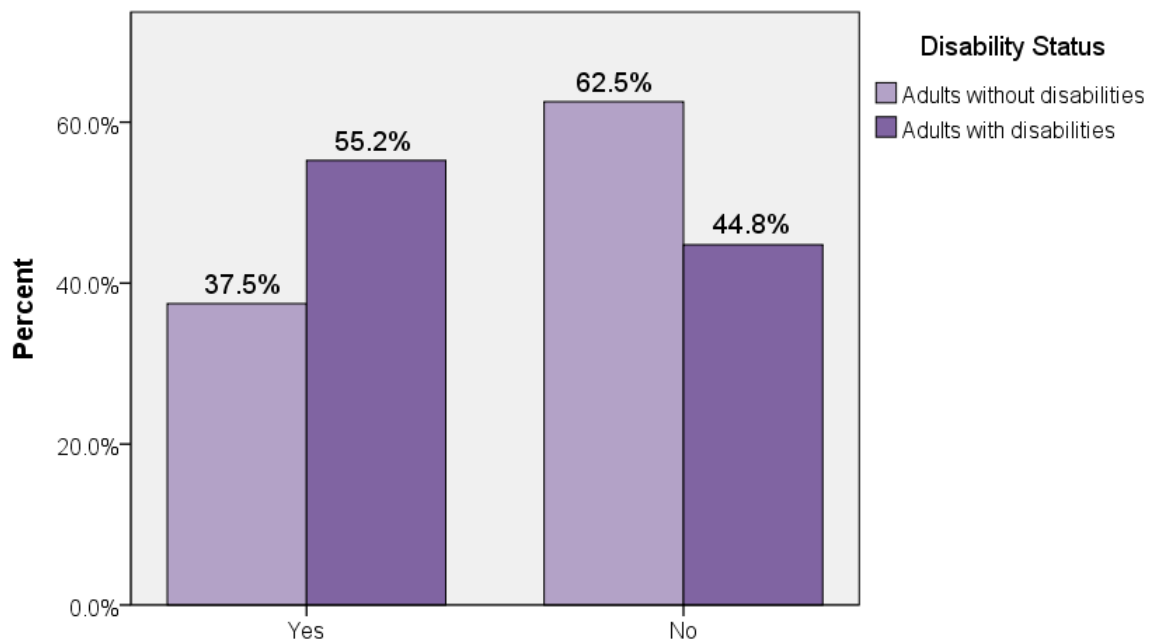


Figure 38. Adults with and without a disability who have ever received a pneumonia shot

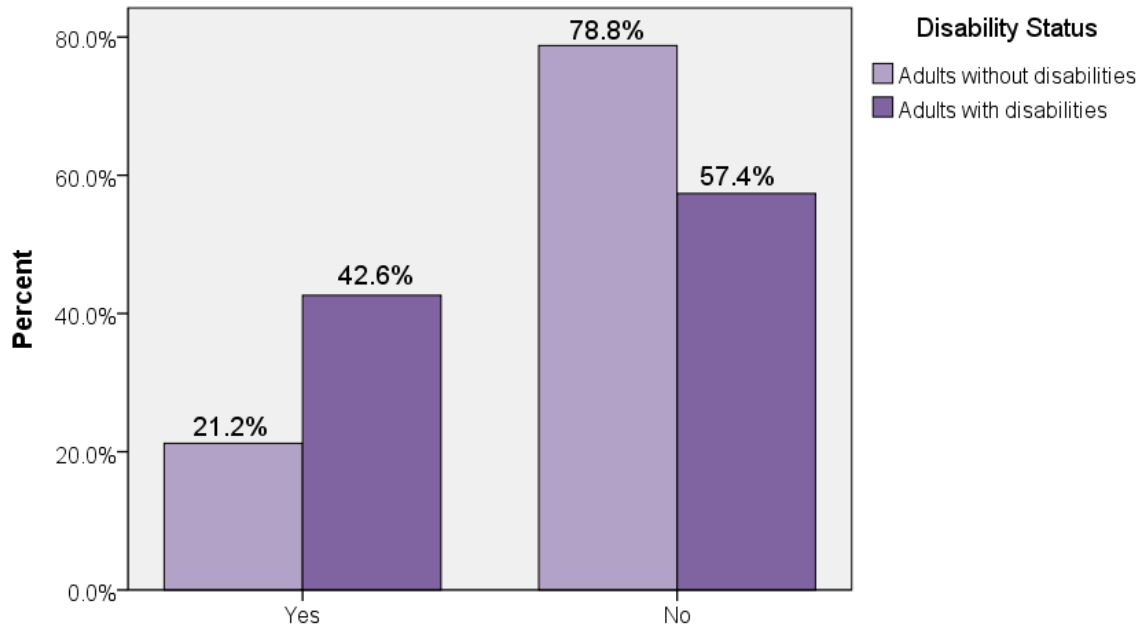
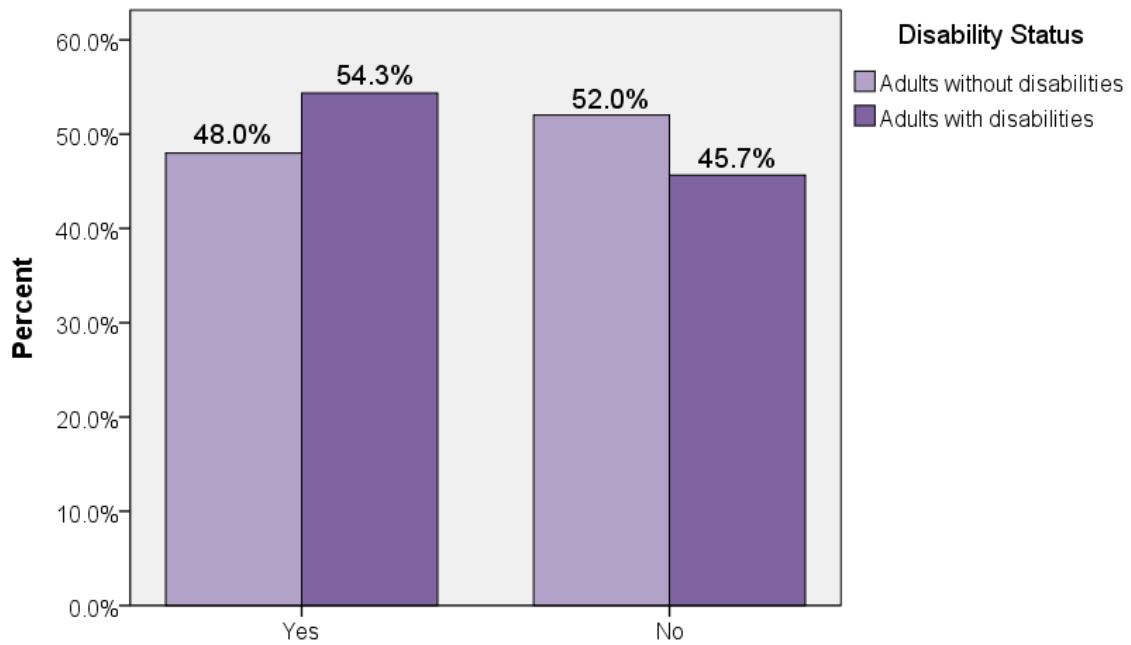


Figure 39. Adults with and without a disability who have ever been tested for HIV



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